CITY OF
MANCHESTER

REPORT
on the
Health of the
City of Manchester

1973

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CITY OF MANCHESTER

REPORT

on the

HEALTH

of the

CITY

of

MANCHESTER

for 1973

by the

MEDICAL OFFICER OF HEALTH

Health Department,
Town Hall,
Manchester, M60 2JS.
Tel. 061-236 3377, Ext. 2558

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DR. JOHN LEIGH
1868–1888

DR. JOHN F. W. TATHAM
1889–1893

Health Department,
Town Hall,
Manchester,
M60 2JS.

March 1974

MY LORD MAYOR, ALDERMEN
AND MEMBERS OF THE CITY COUNCIL,

I have pleasure in presenting my report on the health of the city for 1973.

This is the last Annual Report of the Medical Officer of Health for the City of Manchester, and inevitably there must be some regret at the passing of an office of high distinction.

The first Medical Officer of Health was appointed in March 1868, and in April 1974 the reorganised Local Government and National Health Service commences.

Manchester has the unusual record of having had only six Medical Officers of Health during these 106 years, and this has ensured an exceptional degree of continuity and progress. The Health Committee has been most forward-looking, and the combination of long-serving officers and an active Committee has meant that Manchester's record in the field of public health is second to none.

The tenure of office of Manchester's Medical Officers has coincided almost exactly with definite periods of progression in public health, and it is worthwhile to comment briefly upon them:

> Dr. John Leigh was appointed on 4th March, 1868 and was immediately faced with the stupendous task of initiating sanitary reform, improving hospital accommodation for infectious disease, closing cellar dwellings, and providing baths and washhouses and open spaces in parks. In a comparatively short period, most, if not all, of these reforms were carried out.
>
> Dr. John Tatham succeeded Dr. Leigh in 1889 and throughout his career paid special attention to improving housing conditions. He initiated the process of representation of unfit houses and subsequent clearance. He was also greatly interested in health visiting, and the City Corporation accepted his recommendation to pay the salaries of six health visitors employed by the Manchester and Salford Sanitary Association to visit poor people and to teach them the rules of health. This was the first time health visitors had been employed in this fashion, and it laid the basis of the subsequent child health service.
>
> With the appointment of Dr. John Niven, the next Medical Officer of Health, came the beginning of modern medicine. Over a period of twenty-eight years he improved the whole range of community health services, and his innovations are too many to enumerate. He became a national figure, and undoubtedly he was an outstanding Medical Office of Health.
>
> Dr. Robert Veitch Clark continued the good work started by Dr. Niven, and his tenure of office saw the first scientific attempts to combat infectious disease. He advocated pasteurisation of the milk supply for

the first time in England. With the passage of the Local Government Act of 1929, the Municipal Hospital Scheme came into being—with the transfer of some 8,000 institutional beds to the control of the Corporation. Dr. Veitch Clark had particular interests in slum clearance and smoke abatement, and he was Chairman of the Manchester Committee on Cancer, which sponsored research into the carcinogenic agents in mineral oil used by mule-spinners. The research showed clearly that cancer of the scrotum was caused by the oil used in the process and that it could be reduced by simple methods. The result was that ''Mule''-spinner's cancer became almost extinct.

Dr. Metcalfe Brown was appointed in 1942 and was Medical Officer of Health for twenty-five years. His term of office lay completely in the era of scientific medicine, and there was a tremendous improvement in public health due to drugs and preventive procedures. Like his predecessors, Dr. Metcalfe Brown took a special interest in housing matters and smoke abatement. He laid the foundations of the scheme for the representation of unfit houses which has recently been finished and of the plan for smoke control which will shortly be completed. He initiated and carried out many plans for social welfare.

My own period of office has coincided with a time of social revolution—especially in the field of community care. The emergence of health centres and of schemes of co-operation and interchange with general practitioners and hospital consultants has ensured that the basis for the integration of the National Health Service is well laid. Like all my predecessors, I have had a special interest in environmental hygiene, and it has been my pleasure to see to final completion the slum clearance programme. In addition, the plans for the complete elimination of smoke throughout the city are almost complete. I have helped in laying down the procedure under which noise control in the city will become operative, and I am gratified at the transition of the public health inspector from an all-purpose officer to a highly-specialised practitioner of environmental hygiene.

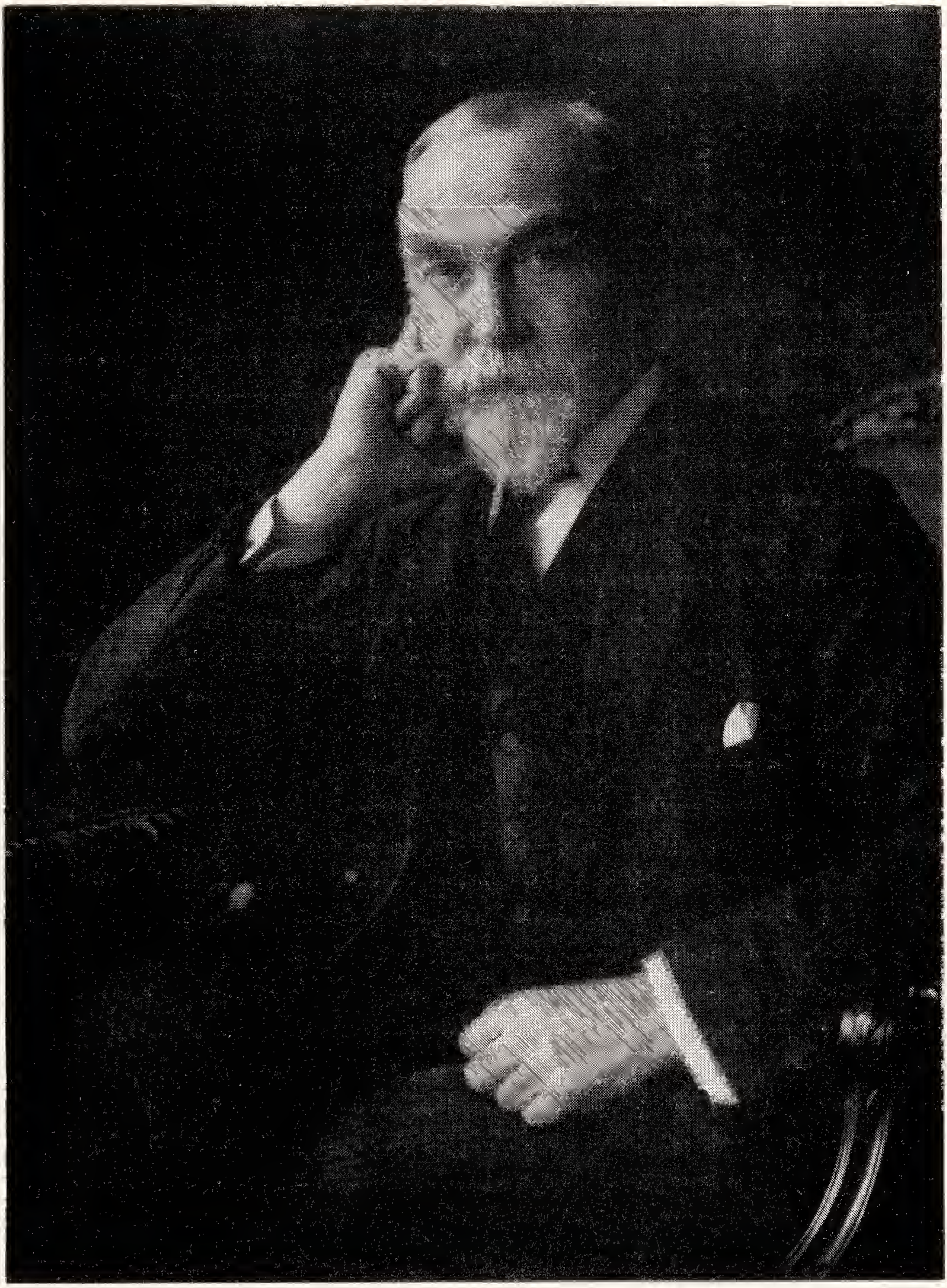
I now turn to the present. 1973 was an excellent year in every way: almost every aspect of the department's work showed an improvement, and the following statistics help to show this more clearly:

	1973	1972
Measles	422	2,529
German measles	737	1,206
Infective jaundice	180	247
Infant gastro-enteritis	194	334

There were 167 cases of scarlet fever—against the average for the last ten years of 212, and 29 cases of whooping-cough—as compared with the average for the last ten years of 393. There were no cases of diphtheria, and the last case of poliomyelitis occurred in 1962.

The measles and whooping-cough cases were the lowest since notification began.

The infant mortality, stillbirth and perinatal mortality rates were the lowest ever, and this continues an improvement which has been noticeable over the last five years.



DR. JAMES NIVEN
1894–1922

DR. R. VEITCH CLARK
1922–1942

There was a small but encouraging decrease in the notification of tuberculosis, both respiratory and non-respiratory. This disease has almost been forgotten in recent years, but there are still substantial numbers of persons suffering from the illness, and most of them could be prevented, using the knowledge we now have.

It is noteworthy that for the tenth consecutive year no case of notifiable disease occurred in animals or poultry within the city.

In 1973 the City Council decided in favour of fluoridation of the water supply—thus bringing to a close a debate which had continued for many years. The Council did not have time to implement its decision, and this task will presumably fall upon the newly-constituted Regional Water Authority.

Varley Street Combined Clinic became operational during the year and incorporates services previously sited at Ancoats and Collyhurst. It provides a purpose-built building with the most modern facilities for the staff.

Family Planning continued its progress with the introduction of a vasectomy service. One clinic is held at St. Mary's Hospital and one at Beswick Health Centre. The normal work of the family planning clinics increased so greatly that it was necessary to arrange additional sessions at several clinics and at St. Mary's Hospital. The training course in family planning for general practitioners was extended, and 180 practitioners in the region applied to attend.

The cervical cytology service was extended to in-patients at United Manchester Hospitals—as was vaccination of staff against rubella. This is a good example of co-operation between the Local Authority and the hospital services which will form the basis of the future health service.

The home nursing and chiropody services are two branches of the department which do not obtain much publicity. They carry out their duties in an unobtrusive manner, and it is pleasing to record that both services substantially increased the amount of work undertaken during the year without any diminution in the high quality of the service provided.

In the field of environmental health, action continued under the Housing Acts, for houses continue to decline and pass into a state of unfitness. Six hundred and fifteen houses were represented during 1973, and this was the first instalment of a clearance programme which will continue for a number of years. As a result of the completion of the slum clearance programme by the Health Department, a very large number of public inquiries were held, and many public health inspectors were engaged in these inquiries.

A record number of improvement grant applications were received, processed and approved during the year: in total, 1,193 applications were approved for schemes valued at £1,418,761, whilst the grant element amounted to £1,005,857.

Progress was maintained in reducing atmospheric pollution, and three Smoke Control Orders were made, containing 15,888 houses and 935 other buildings. At the present time, within the city boundaries 18,939 acres of land, containing 102,578 houses and 9,662 other buildings, have so far been incorporated in smoke control areas.

The investigation of noise nuisance continued, and the number of complaints regarding noise increased. This is understandable, as the public are now less tolerant of noise in the environment. The Health Department has acquired a number of sophisticated instruments for the investigation of problems in this field, and there is no doubt that this will be an important aspect of the Environmental Health Department's work during the coming years.

The number of food-poisoning cases was 83, and this showed a welcome reduction from the previous year. At the same time, as food-poisoning is a wholly preventable disease, the department laid great emphasis on the importance of a thorough understanding of food hygiene by food handlers. An important development was the acceptance by the hospital authorities of an invitation from the department to co-operate with them in raising food hygiene standards in their catering establishments. Work has started on investigations into food handling facilities and practices at various institutions, and it is pleasant to acknowledge the co-operation of the hospital staffs with the department's officers.

During the year, the department embarked on two new ventures in pollution control: surveys were made of several areas to establish the environmental problems of specific parts of the city; and work was started to investigate the total pollution potential of factories.

After April 1974 the environmental health section of the department will merge into the Environmental Health Department of the District Council, and a completely new view will be taken of environmental health in relation to the totality of the city. There can be no doubt that a great future lies ahead of the staff of the new department.

Throughout the year, most of the senior members of the department were engaged very heavily on work on Local Government and National Health Service reorganisation. This included the preparation of information for the new authorities and the attendance of staff at many meetings where the new pattern of administration was decided.

Work on capital projects continued as far as possible, so that any project could proceed when Government sanction was received. A priority list of health centres has been drawn up which will enable capital allocations of spending for the first year of the National Health Service authority to be calculated.

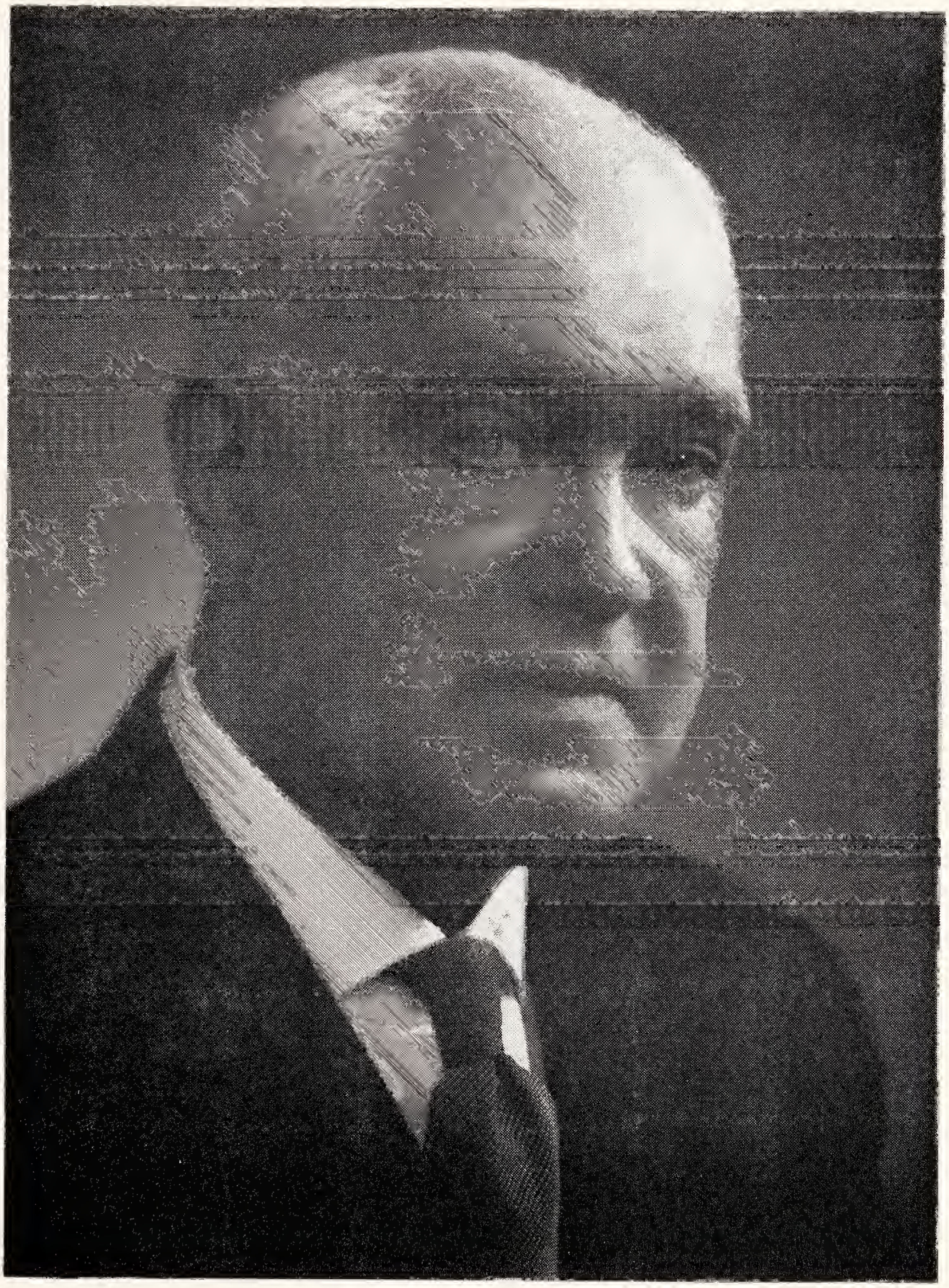
I have to thank the members of my staff, who have given me their fullest co-operation over a period of years. I am sure that in the new authorities they will continue to use their gifts in the service of mankind.

I have at all times had the support of the Health Committee and Chairmen, without which little could have been done.

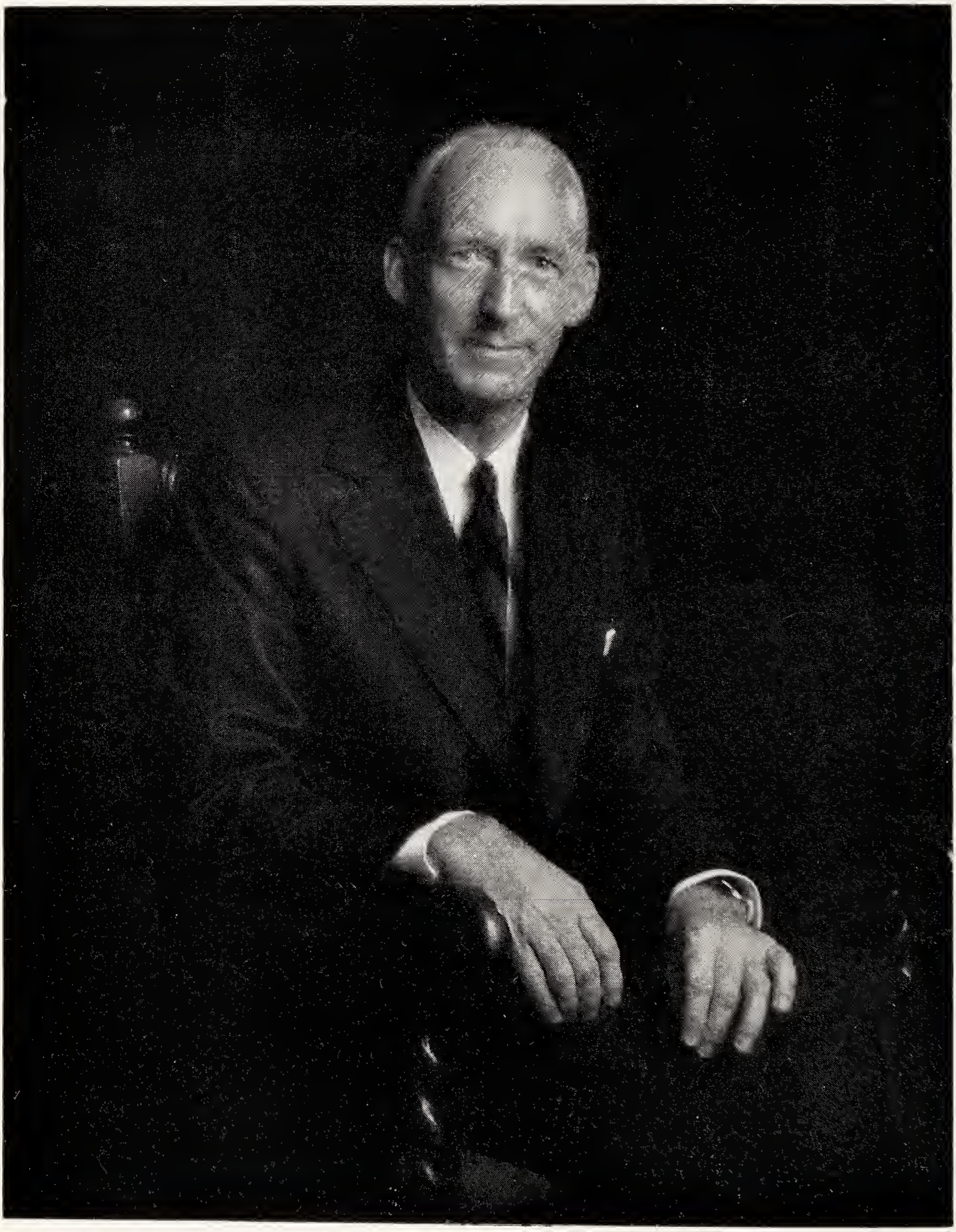
The time has come to close the chapter on Public Health: a new one opens on Community Medicine and Environmental Health.

KENNEDY CAMPBELL,

Medical Officer of Health



DR. C. METCALFE BROWN
1942–1967



DR. KENNEDY CAMPBELL
1967–1974

Statistical Summary

Population

The Registrar General estimates the civilian population for mid-1973 at 530,580, a decrease of 690 on 1972. This compares with the census figure of 543,650 taken in April, 1971.

Births

Registered live births numbered 6,818 (3,568 males, 3,250 females), giving a rate of 12·85 per 1,000 population compared with 14·55 in 1972. The rate for England and Wales was 13·7. a decrease of 1·1.

Of the 6,818 births, 5,429 (2,870 males, 2,559 females) were legitimate and 1,389 (698 males, 691 females) were illegitimate. The percentage of illegitimate births continued to rise, being 20·37 against 20·06 in 1972, an increase of 0·31.

There were 88 stillbirths (49 males, 39 females), a decrease of 17 on the previous year's figures, giving a rate of 12·74 per 1,000 total births. This was 0·66 lower than that for 1972 and 1·82 lower than 1971. The rate for England and Wales was 11·9, a decrease of 0·1.

The percentage of total registered births taking place in institutions was 96·25.

Deaths

The number of deaths registered during the year was 7,176 (3,611 males, 3,565 females), giving a death rate of 13·52 per 1,000 of the population, as compared with 13·57 for 1972 and an average of 13·10 for the previous five years. The rate for England and Wales for 1973 was 11·9, a decrease of 0·2.

Deaths from all forms of tuberculosis numbered 30, 1 less than in 1972. Respiratory tuberculosis accounted for 24 deaths compared with 28 in 1972. The death rate from respiratory tuberculosis was 0·05 per 1,000 population. Other forms of tuberculosis were responsible for 6 deaths compared with 3 in 1972.

Deaths from all forms of cancer were 1,502 compared with 1,520 in the previous year. Deaths from cancer of the lung and bronchus increased by 2 to 504 (415 males, 89 females) against 502 (405 males, 97 females) in 1972. The death rate from all forms of cancer was 2·83 per 1,000 population (2·86 in 1972) and that from cancer of the lung and bronchus 0·95 (0·94 in 1972).

Deaths from bronchitis fell to 419 a rate of 0·79 per 1,000 population compared with 421 deaths (0·79 per 1,000 population) in 1972 and 426 deaths (0·79 per 1,000 population) in 1971.

Infant mortality

Deaths of infants under one year of age registered during the year numbered 151, 21 less than 1972, giving an infant mortality rate of 22·15 per 1,000 live births, the lowest ever recorded, a decrease of 0·11 compared with 1972. The rate for England and Wales for 1973 was 18·1.

The number of neonatal deaths was 99 giving a rate of 14·52 per 1,000 live births. The figures for 1972 in Manchester were 118 and 15·27 compared with 134 and 15·01 in 1971. Early neonatal deaths decreased to 91 from 107 for the previous year and 124 in 1971 a rate of 13·35 per 1,000 live births, compared with 13·85 in 1972 and 13·89 in 1971.

Post-neonatal deaths decreased to 52 compared with 54 in 1972 and 76 in 1971, the rates per 1,000 live births being 7·63, 6·99 and 8·51 respectively.

Perinatal deaths numbered 179 giving a rate of 25·92 per 1,000 total births (live and still) compared with 212 and 27·06 in 1972.

Maternal mortality

There were no maternal deaths for the third year running.

HEALTH COMMITTEE 1973

(Back Row) Mr. D. Gregory, Councillor P. A. Sless, Councillor E. Donoghue, Councillor J. I. Owen, Councillor C. B. Muir, Mr. R. Buckley.
(Centre) Councillor J. V. Marshall, Councillor G. Conquest, Councillor Mrs. J. Taylor, Councillor J. Gilmore, Councillor Mrs. J. D. W. Hill, Councillor F. R. Butler, Mr. E. W. Foskett.
(Front Row) Councillor J. Dean, Alderman Miss L. Thomas, Dr. Kenneny Campbell, Alderman Dr. J. Taylor (Chairman), The Lord Mayor (Alderman K. Collis), Councillor T. O. Hamnett (Deputy Chairman), Alderman Sir Robert Thomas, Alderman J. G. Birtles, Councillor M. Flynn.

HEALTH COMMITTEE

Members of the City Council who served on the Health Committee in 1973.

The Lord Mayor

Chairman

Alderman J. Taylor, J.P., M.B., Ch.B.

Deputy Chairman

Councillor T. O. Hamnett

Aldermen

J. G. Birtles
K. Collis (until 23rd May, 1973)
Miss L. Thomas, J.P.
Sir Robert Thomas, D.L., J.P.

Councillors

F. R. Butler
G. Conquest
J. Dean
Mrs. M. Delayen
E. Donoghue
M. Flynn
J. Gilmore
Mrs. J. D. W. Hill
J. V. Marshall
G. M. Morton
C. B. Muir
J. I. Owen, J.P. (from 23rd May, 1973)
Miss M. Pierce
P. A. Sless
Mrs. J. Taylor

Sub-Committees

The Health Committee appointed the following Sub-Committees to carry out certain of the duties referred to the Committee:—

Legal Proceedings

The issue of certificates of disrepair and qualifications certificates; the institution of legal proceedings and other action in connection with alleged infringements of the Clean Air Acts, the Food and Drugs Acts, the Offices, Shops and Railway Premises Act, the Factories Acts, and the Public Health Acts, and subordinate legislation; where necessary for the purpose of legal proceedings—the approval or notification of the service of statutory notices and other action taken or proposed to be taken by Chief Officers under delegated powers; the authorisation of officers to enter premises or exercise specific statutory powers; the institution of legal proceedings or other action in connection with alleged infringements of the Pharmacy and Poisons Act, 1933; the institution of legal proceedings or other action in connection with the Slaughterhouse Act, 1958.

Estimates

To consider the draft estimates of the Health Committee including all items of special works and to submit recommendations thereon to the Committee before the estimates are submitted to the Finance Committee.

Residential Homes

To deal with all matters relating to the control and management of the Dr. Garrett Memorial Home, Ashton House and Walton House with the exception of questions relating to the appointment of staff, salaries, wages and conditions of service and the purchase of bulk supplies.

STAFF

Kennedy Campbell, M.A., M.D., LL.B., D.P.H., L.M.	Medical Officer of Health and Principal School Medical Officer
Anna Elizabeth Jones, M.B., B.Ch., B.A.O., M.F.C.M., D.G.O., D.P.H., L.M.	Deputy Medical Officer of Health and Deputy Principal School Medical Officer

Management Group

N. J. Moult, M.C.I.T., A.M.R.S.H.	Principal Administrative Officer (Resigned 30.9.73)
D. Gregory, B.A.(Admin), A.C.I.S., F.H.A. A.M.R.S.H.	Chief Assistant (Finance & General) and Acting Principal Administrative Officer (from 1.10.73)
W. V. Nelson, D.M.A.	Chief Assistant (Personnel & Training)

Environmental and Protective Health Services

A. Butterworth, M.B., B.S., M.F.C.M., D.P.H., D.I.H.	Principal Medical Officer
John Francis Cawley, L.R.C.P.I., L.R.C.S.I., M.F.C.M., L.M,. D.P.H.	Deputy Principal Medical Officer (Resigned 27.9.73)
F. W. A. Turnbull, M.R.C.P. Ed.	Consultant Chest Physician
E. W. Foskett, B.Sc.(Econ.) D.P.A., M.A.P.H.I., M.R.S.H.	Chief Public Health Inspector
J. B. Aldred, M.A., M.Chem.A., F.R.I.C., F.I.E.S.T.	Public Analyst
F. P. Lawton, M.R.C.V.S., D.V.S.M., F.R.S.H.	Chief Veterinary Officer
F. R. Huxley, F.I.A.O.	Ambulance Officer
W. E. Green, M.B.E. R. W. Peel	Senior Administrative Assistants

Dr. Garrett Memorial Home

Mrs. J. Knowles, S.R.N., Q.D.N.	Matron

Ashton House (Women's Hostel)

Mrs. E. Woodhouse	Manager

Walton House (Men's Hostel)

Mr. H. Taylor	Manager

Personal Health Services

Family Health Service

Muriel Leigh Bennett, M.B. Ch.B. M.F.C.M.	Principal Medical Officer
Howard Jonathan Miller, M.B. Ch.B.	Deputy Principal Medical Officer
Muriel Jane Brayshay, M.B., Ch.B. M.F.C.M.	Senior Medical Officers
Rosaline Howat, M.B., Ch.B.	
Margaret Longden Marsland, M.R.C.S., L.R.C.P., M.F.C.M.	
Mairin Buckley, M.B., B.Ch., B.A.O., L.M.	Departmental Medical Officers
Stephanie Brier, Cave, M.B., Ch.B., D.C.H.	
Elsie Margaret Dakin, M.B., Ch.B.	
Elizabeth Frances Evanson, M.B., B.Ch., B.A.O.	
Mahar Qamrul Hasan, M.B., B.S., D.T.M. & H., M.R.C.O.G.	
Jennifer Mary Hill, B.Sc.(Hons.), M.B., Ch.B., D.Obst., M.R.C.O.G.	
Sheila Macdonald Johnson, L.R.C.P, S.I.	
Gwen Ellis Owen, M.B., Ch.B.	
Jill Roland, M.R.C.S., L.R.C.P.	
Anuradha Sundaram, M.B.B.S.	
Ram Labhaya Tandan, M.B., B.S.	
Stella Yeomans, M.R.C.S., L.R.C.P.	
Miss E. France, S.R.N., S.C.M., M.T.Diploma, H.V. Certificate	Director of Nursing Services
Miss M. Thistlethwaite, M.B.E. S.R.N., S.C.M., Q.N., H.V. Certificate	Divisional Nursing Officer (District Nursing)
Mrs. M. C. Maxwell-Bradley, S.R.N., S.C.M., H.V. Certificate	Divisional Nursing Officer (Health Visiting and School Nursing)
Mrs. J. Green, S.R.N., S.C.M., Q.N., H.V. Certificate, Tutor's Certificate (R.C.N.)	District Nurse Tutor
H. A. Parsonage, S.R.N., Q.N. H.V. Certificate	Community Nurse Tutor
D. J. Tyrell, M.Ch.S., S.R.Ch.	Chief Chiropodist
R. H. Goodwin, D.M.A., M.I.L.G.A.	Senior Administrative Assistant

School Health Service

Margaret T. McCaffrey, M.B., B.Ch. B.A.O., D.P.H., D.C.H., L.M., M.F.C.M.	Principal Medical Officer
Sheilagh M. Davitt, B.A., M.B. B.Ch., B.A.O.	Deputy Principal Medical Officer
Shirley A. Batten, M.B., Ch.B., D.C.H.	Senior Medical Officer
Raymond H. L. Brown, F.R.C.S.	Consultant Orthopaedic Surgeons
John D. Evans, F.R.C.S.	
Peter L. Blaxter, F.R.C.S.	Consultant Ophthalmologist
Maxwell J. Maxwell, F.R.C.S., D.L.O.	Consultant Oto-Laryngologist
Norman P. Chamarette, B.Sc., M.B., B.S., D.P.M.	Psychiatrists
T. E. Grant, B.A.(Econ. and Social Studies), L.R.C.P., L.R.C.S. L.R.F.P.S. D.P.M.	
Elizabeth Stokes, F.R.C.S.I., L.R.C.P.I., L.M.	Senior Medical Officers
Pearl P. Mycock, M.B., Ch.B. D.R.C.O.G.	
Joyce Somekh, M.B. Ch.B., L.D.S.	
Elizabeth A. Hyde, M.B., Ch.B. (from 10th September, 1973)	
Vincent J. Haslam, L.R.C.P.I., L.R.C.S.I., L.M.	Departmental Medical Officers
Nisar A. Tahir, M.B., B.S., D.C.H. D.T.M. & H.	
John J. Aitken, M.B., Ch.B.	Departmental Medical Officers (part-time)
Michael C. Davitt, M.B., B.Ch., B.A.O.	
Mary J. Delaney, M.B., Ch.B., D.C.H.	
Rosalind C. Eirew, M.B., Ch.B., M.R.C.P., L.R.C.S., D.C.H.	
Martin K. Fisher, L.R.C.P.S.I., D.O.M.S.	
Henry M. Freedman, L.R.C.P.I., L.R.C.S.I., L.M.	
Marjorie M. Grant, M.R.C.S., L.R.C.P. (resigned 30th April, 1973)	
Margaret E. Happold, B.A., M.R.C.S., L.R.C.P. D.C.H.	
Geoffrey W. R. Hill, M.B., Ch.B.	
Joan N. Horton, M.R.C.S., L.R.C.P.	
Elizabeth A. Hyde, M.B., Ch.B. (to 7th September, 1973)	
Ann Jackson, M.B., Ch.B.	

William C. Kingston, M.B., Ch.B., B.A.O., D.P.H.	Departmental Medical Officers (part-time)
Joan MacCarthy, M.B., B.Ch., B.A.O., D.P.H.	
Richard L. Marcus, M.B., Ch.B., D.C.H.	
John F. Moroney, M.B., B.Ch.	
Peter J. North, M.R.C.S., L.R.C.P.	
Patrick D. O'Brien, L.R.C.P.S.I., D.P.H. D.O.M.S.	
Gunuant R. Patel, M.B., B.S. D.O.M.S.. D.O.	
Joan H. Paton, M.B., Ch.B.	
Patricia Copeland Powell, M.B., B.S. (from 30th April, 1973)	
Abdul S. Shaik, M.B., B.S., M.R.C.P.	
Zaib S. Shaikh, M.B.B.S., D.C.H.	
William C. Smith, M.B., Ch.B.	
Rachel Tepper, M.B., Ch.B.	
Tom A. J. Thorp, M.B., Ch.B., D.P.H., D.O.	
Gordon L. Lindley, L.D.S.	Principal School Dental Officer
Maureen Attrill, L.D.S.	Deputy Principal School Dental Officer
Maureen N. Barker, B.D.S.	Senior Dental Officers
Deanne Brooks, L.D.S. (resigned 31st August, 1973)	
Thomas I. Curry, L.D.S.	
Pamela A. Dixon, B.D.S. (from 5th November, 1973)	
Teresa A. Gilbride, L.D.S., R.C.S.	
Vincent J. T. May, B.D.S. L.D.S.	
J. Spencer Butterworth, B.D.S.	Dental Officers
Pamela A. Dixon, B.D.S. (to 2nd November, 1973)	
Alexandrina Dow, B.D.S. (resigned 14th December, 1973)	
Irena I. Filipiec, L.D.S., R.C.S.	
Norman B. Glickman, L.D.S.	
James A. Robinson, L.D.S.	
Gwyneth Saunders, B.D.S.	
Gillian Margaret Shepperd, B.D.S. (resigned 31st August, 1973)	
Tom Dinsdale, M.B., Ch.B., F.F.A., R.C.S.	Consultant Anaesthetists
Edward G. Rees-Jones, M.B., Ch.B., D.A.	
Kenneth Heap, M.B., Ch.B. D.A.	
Bernard R. Puddy, M.B. Ch.B., D.A.	
Hans Eirew, B.D.S.	Consultant Orthodontists
Alan A. Rhodes, L.D.S., D.D.O.	
S. Iyer, L.D.S., D.D.O., R.F.P.S., F.D.S., R.C.S.	
Brenda Kellett, L.C., S.T.	Senior Speech Therapist

Mary Downer, M.C.S.P.	Superintendent Physiotherapists
Marjorie Hendley, M.C.S.P.	
Maureen Hutchinson, M.C.S.P. (from 8th May, 1972)	
Peggy S. Foxcroft, B.A. (resigned 30th June, 1973)	Senior Social Workers
Elizabeth M. Mtezuka (from 23rd July, 1973)	
Olga M. Ravenscroft	Senior Administrative Assistant

Publications by Members of the Health Department Staff

Kennedy Campbell Medical Officer of Health	"Port Health in the Manchester Area".
Butterworth, A. (Principal Medical Officer—Environmental and Protective Health Services)	Paper:—"Three cases of meningococcal infection in a family, associated with a deficient immune response", in conjunction with Drs. A. M. Jones and B. A. Toon. Archives of Disease in Childhood Vol. 48 No. 9, September, 1973.
Foskett, E. (Chief Public Health Inspector)	Paper:—"An assessment of the existing built environment". Presented at a symposium held in the Department of Civil Engineering, University of Salford 28/29 June, 1972.
Newton, S. (Senior Public Health Inspector Food)	Article:—"The public health part in food". Health, December 1972.
Coope, W. M. (Assistant Principal Public Health Inspector)	Article:—"Fatality in Lift" Law Reports Environmental Health September, 1973.

Number of staff employed in the Health Department in December, 1973

Type of staff	Numbers employed		
	Full-time	Part-time	Total
Administrative medical officers	8	—	8
Clinical medical officers	20	57	77
Analytical chemists and laboratory assistants	11	—	11
Veterinary officers	3	—	3
Director of nursing services	1	—	1
Nursing:—			
Health visitors, school/clinic nurses	138	45	183
Home nursing	120	29	149
Midwifery	50	16	66
Residential homes	5	—	5
Physiotherapists	12	7	19
Chiropodists	6	28	34
Speech therapists	12	9	21
Audiologists	—	2	2
Social workers	7	4	11
Community relations officer	1	—	1
Dental officers	11	13	24
Dental auxiliaries	6	—	6
Dental technicians	5	—	5
Dental surgery assistants	34	2	36
Orthodontists	—	3	3
Anaesthetists	—	6	6
Orthoptists	1	1	2
Public health inspectors	81	—	81
Student public health inspectors	18	—	18
Technical assistants (clean air, housing, shops)	32	—	32
Trainee technical assistants	1	—	1
Authorised meat inspectors	14	—	14
Trainee Meat Inspectors	2	—	2
Administrative and clerical	203	46	249
Ambulance operational control and supervisors	20	—	20
Storekeepers and assistants	5	—	5
Supervisors, public conveniences	3	—	3
Operational manual workers, etc.			
Ambulance, transport and disinfection	179	1	180
Staff in residential homes	51	21	72
Staff in municipal hostels	31	10	41
Public convenience service	56	30	86
Family health centre cleaners	20	39	59
Rodent operators	8	—	8
Bath attendants	15	7	22
Clinic attendants	7	7	14
Others	8	1	9
Totals	1,205	384	1,589

Organisation of the department

The year marked the twenty-fifth anniversary of the health services organised under the National Health Service Act, 1946. During this period, the services of the department have been directed towards the protection of the citizens of Manchester against existing hazards, the prevention of potential hazards and the promotion of health education. In 1948, the vast system of municipal hospital administration passed to the Regional Hospital Board and health department administration was focussed on the creation of the new care and after-care services to be added to the already existing environmental services. After an initial settling-in period the various services of the department were organised into four functional groups, each of which was administratively independent of the remaining three and this form of organisation existed for almost twenty years. The implementation of the Social Services Act, 1970, again resulted in major services being transferred, this time to the newly formed Social Services Department, but once more the transfer was balanced in some measure by the addition of the School Health Service to the Health Committee functions.

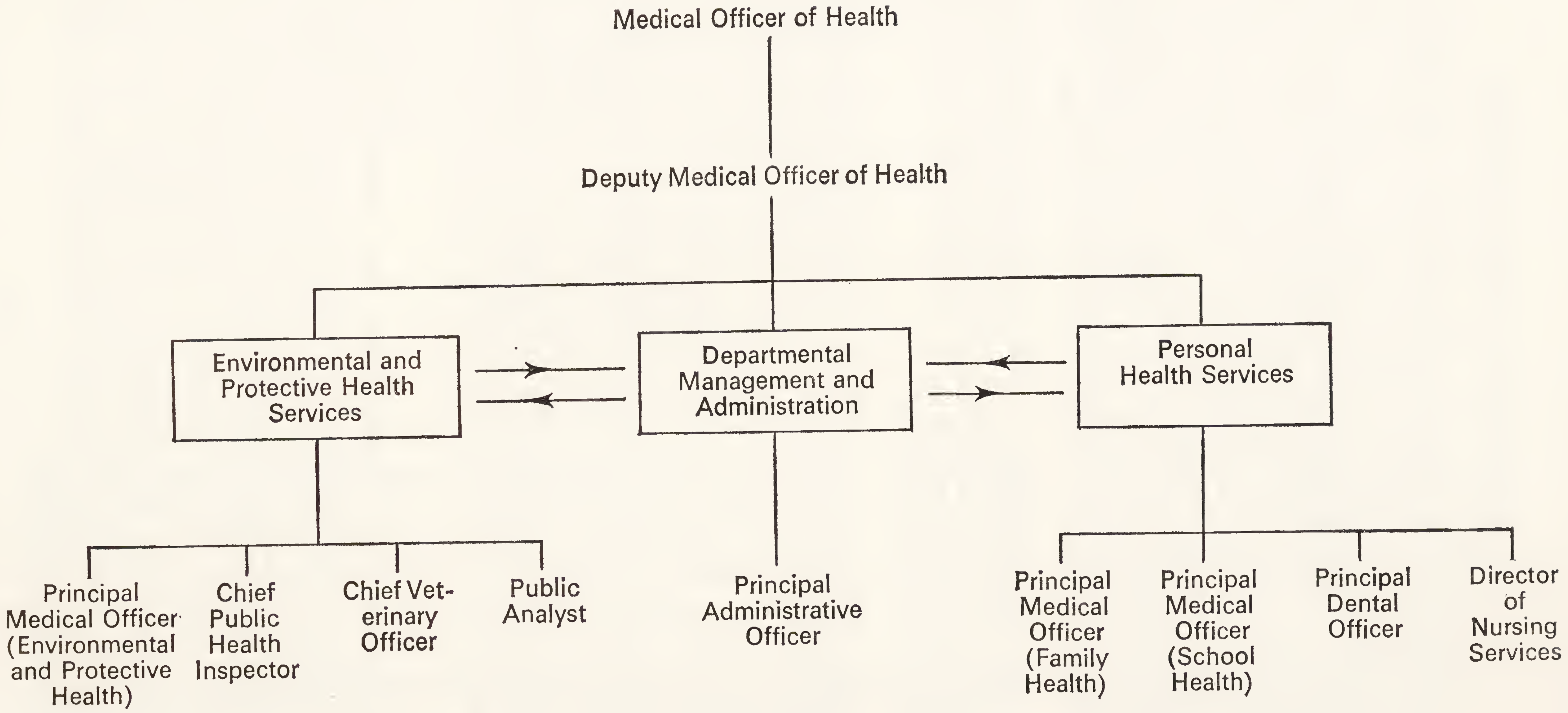
After much deliberation, a revised departmental administrative structure was introduced in 1971, and is shown in the accompanying diagram. This includes the implementation of the functional scheme of management in the nursing services as outlined in the report of the Mayston Committee, which has now been completed.

Major schemes of re-organisation, affecting local government services in general and health services in particular, were laid down by Parliament in the Local Government Act, 1972 and the National Health Service Reorganisation Act, 1973, both of which will have effect on 1st April, 1974. Under these two statutes, the functions of the department will be divided between four new authorities, the Greater Manchester County Council, the Manchester Metropolitan District Council, the North Western Regional Health Authority and the Manchester Area Health Authority. By the end of the year, the two shadow local authorities had established their departmental structures and commenced to appoint staff to fill new positions. The two shadow health authorities, however, had only just undertaken the appointment of their principal officers. At this stage some members of staff from the Health Department have obtained posts with new departments, mainly outside the health service. The division of functions between the four authorities follows in most cases the organisational structure set up in 1971 although there will obviously be some areas where difficulties will arise.

Departmental Management and Administration Group

The three senior officers of the group are concerned with the co-ordination of management and administration within the Health Department and with the observances of the City Council's regulations. They also exercise functional responsibilities relating to the monitoring and co-ordination of financial matters, co-ordination of committee work, liaison with other departments of the Corporation and other authorities and organisations, the progress of capital projects, forward planning and the development of services. Departmental control and co-ordination in the personnel function, including staff training and management development, together with certain routine duties in connection with the preparation of salaries and wages and the maintenance of staff records for departmental personnel, form another significant area of activity.

Organizational Structure of the Health Department



Medical Officer of Health
Deputy Medical Officer of Health
Environmental and Protective Health Services
Departmental Management and Administration
Personal Health Services
Principal Medical Officer (Environmental and Protective Health)
Chief Public Health Inspector
Chief Veterinary Officer
Public Analyst
Principal Administrative Officer
Principal Medical Officer (Family Health)
Principal Medical Officer (School Health)
Principal Dental Officer
Director of Nursing Services

In October, the Principal Administrative Officer of the group obtained a management appointment in another department of the Corporation. Because of the impending reorganisation of the National Health Service, the Health Committee resolved that his duties should be taken over by the two Chief Assistants, who in turn handed down certain of their duties to subordinate staff.

Work in connection with reorganisation especially in the National Health Service field made significant demands on the resources of the group. Membership of working parties or their working sub-groups, the resultant collection of material for regional and area profiles prepared by the respective Joint Liaison Committees, the preparation of details relating to the transfer of properties and staff to the new authorities took up considerable time. The dissemination of information to staff through the Information Room and through the issue of news bulletins was continued.

Reciprocal visits to certain hospital groups within the City were continued to allow staff of both local health services and hospitals to understand each others problems and methods.

Assistance was given to the Town Clerk through the group in connection with a review of local legislation which affects reorganisation proposals.

Work continued in connection with the Health Committee's capital programme. The Varley Street Combined Clinic was opened in October and replaced two former premises used by local health and school health medical and dental services. A temporary maternal and child health clinic was opened in Newton Heath to replace the previous clinic which was due for demolition and which was declared unsafe for use. For this purpose a site was leased from the Housing Committee on which the prefabricated school clinic formerly at Stretford Road, Hulme was re-erected. Improvements to the central heating system at Walton House Hostel were carried out during the summer months as one stage in the main scheme of improvement of the hostel.

The remainder of the schemes in the capital building programme fall into two classes, both of which have been severely affected by the Government's restrictions on new capital development. One class, including the remainder of improvements to Walton House, the replacement of Ashton House hostel for women, improvements to the Dr. Garrett Memorial Home and new public conveniences will remain as a local authority responsibility. The second and largest class, including eleven health centres which will provide accommodation for both community health and general medical practitioner services and extensions to the ambulance headquarters, will become the responsibility of the new National Health Service authorities.

At the request of the Department of Health and Social Security, a priority list was drawn up relating to the proposed health centres where construction was planned to commence during 1974/75 and confirmed by the Health Committee and the Manchester Executive Council. This list is to assist the Department of Health and Social Security in allocating capital allocations during the first twelve months of the reorganised health service.

In connection with health centre planning, liaison between the local authority and the Manchester Executive Council continued to be effected through a Working Party and through regular planning meetings attended by officers from the Health, City Planning, City Architects, City Estates and Valuation Departments of the Corporation and the Manchester Executive Council. Appropriate general practitioners were consulted about detailed plans for health centres in which they are interested.

Liaison with other departments of the Corporation and other authorities also played an important part in the group's activities. One example is the Joint Consultative Committee composed of senior officers of the Health and Social Services Departments, which held meetings convened jointly by the Principal Administrative Officer and an Assistant Director of Social Services, to discuss liaison procedures between the two departments and to exchange views on mutual problems.

In the publicity field, further contributions were made to Manchester's civic newspaper "The Mancunian Way". During the Festival of Manchester arrangements were made for the department to participate in the "Transpo 73" Exhibition.

A selection of other matters dealt with through the group included the arrangements, so far as the department was concerned, of dealing with the introduction of Value Added Tax, a review of fire precaution arrangements at the various establishments, and arrangements to deal with the fuel crisis which restricted the quantities of heating oil, petrol and electricity used by the health services.

Personnel work

The administrative and clerical work caused by the increasing demand for housing improvement grants was investigated and quantified. An increase in the clerical staff assigned to this work proved necessary.

A productivity bonus scheme was finally introduced for the Control staff in the Ambulance Service. Prolonged work study investigations into very complex procedures and difficult negotiations with staff interests had delayed the introduction of the bonus scheme but eventually realistic compromise by all parties involved enabled agreement to be reached.

Other special activities included arrangements for dealing with pre-employment medical reviews for staff appointed to posts with the Greater Manchester Council; a limited O. & M. investigation into the secretary/receptionist arrangements at the Brunswick Health Centre; an investigation into certain staffing problems in the meat inspection service at the Manchester Abattoir and the start of an exercise to assess the benefits of a "Management by objectives" approach to certain administrative problems in the School Health Service.

It is hardly surprising that the personnel function has been especially susceptible to the pressures of impending health service and local government reorganisation. Concern is felt particularly for local authority staff due for transfer to the new health authorities who, with the appointed day only a few months away, can still see only uncertainty and possibly unwelcome change in their future. In this unsettled climate personnel resources have had to be diverted to matters of morale by attempts to reassure and inform staff both by wide dissemination of available information and by a series of meetings to explain the reorganisation proposals. Specific additional tasks have been imposed including preliminary work needed to ensure a smooth transfer of salaries and wages payments from the existing local authority to the new health authorities.

The worst fears that a period of increased tempo in preparatory work for reorganisation might coincide with staff losses caused by officers seeking the certainty of appointments with the new local authorities have been realised, particularly in the departmental management section. The ability of the management team to cope with this situation has been significantly assisted by the flexible and non-hierarchic organisational approach which the team has developed since its inception. Unfortunately a short life expectancy from its birth in 1971 has given insufficient time for the management team to develop its full potential. The other major change resulting from the 1971 departmental restructuring namely, the increased responsibilities and authority given to middle and first line management levels of administration and clerical staff has operated long enough for at least one objective test of its success to be applied—that of staff turnover rate. It is satisfactory to note that no staff vacancies from the department occurred at these levels after 1971 until the latter part of this year when health service reorganisation introduced a new disturbing factor.

In this final contribution to a section of the Annual Report which appeared in this form for the first time only two years ago it is not unreasonable to give a backward glance and see how such matters were reported, say, in 1948. The simple truth is that they were not. That such an omission today would be quite unthinkable is yet another example of the new attitudes created by fundamental changes in our present turbulent society which are still far from being satisfactorily assimilated.

Training

The lecture series for middle and first line managers provided by the Manchester Polytechnic was completed in the early part of the year. A further management development programme using group training methods had to be postponed because of increasing preoccupation with reorganisation and integration training. For similar reasons the external training course programmes arranged by the Town Clerk's Training Section were discontinued. To some extent this gap will be filled next year by courses now being planned by a joint committee consisting of Manchester Polytechnic staff, regional and group hospital Board staff and personnel staff from this department. A similar committee was formed to prepare plans for a further series of integration courses to be held at the Polytechnic in 1974.

At the beginning of the year there were still some senior officers who had not attended a management course. At the request of this department the Town Clerk was able to arrange a special course for these officers together with officers of other closely associated departments including the Education and Social Services Departments. The course was a shortened version of the two-week top management course previously held at Haweswater and concentrated on the application of behavioural science techniques in the understanding of complex management and organisational relationships. Those attending included the Deputy Principal Medical Officer (School Health); the Principal Dental Officer and his deputy and several senior medical officers.

PROTECTIVE HEALTH SERVICES

General Statistics

(Figures from the Registrar General)

Population:—

Registrar General's estimated population mid-year 1973	Males	257,616	
	Females	272,964	530,580
Census population, 1971	Males	263,625	
	Females	280,025	543,650

Deaths:—

Number of deaths	Males	3,606	
	Females	3,568	7,174
Death rate per 1,000 of population	Males	14·00	
	Females	13·07	13·52
Comparability factor			1·06
Death rate as adjusted by factor			14·33
Percentage of mortality occurring in institutions			59·73

Births:—

		Males	Females	Total	
Live births	Legitimate	2,828	2,565	5,393	
	Illegitimate	761	732	1,493	6,886
Live birth rate per 1,000 of population					12·98
Comparability factor					0·96
Birth rate as adjusted by factor					12·46
Illegitimate live births per cent of total live births					21·68

		Males	Females	Total	
Stillbirths	Legitimate	37	31	68	
	Illegitimate	13	7	20	88
Total live and stillbirths					6,974
Stillbirth rate per 1,000 total births (live and still)					12·62

Infant mortality:—

Deaths of all infants under one year	154
Rate per 1,000 total live births	22·36
Deaths of legitimate infants under one year	120
Rate per 1,000 legitimate live births	22·25
Deaths of illegitimate infants under one year	34
Rate per 1,000 illegitimate live births	22·77

Neonatal mortality:—

Deaths of infants under four weeks	101
Rate per 1,000 total live births	14·67

Early neonatal mortality:—

Deaths of infants under one week	91
Rate per 1,000 total live births	13·22

Post-neonatal mortality:—

Deaths of infants over four weeks and under one year	53
Rate per 1,000 total live births	7·70

Perinatal mortality:—

Stillbirths and deaths of infants under one week	179
Rate per 1,000 total births (live and still)	25·67

Maternal mortality:—

	Deaths	Rate per 1000 of total births	
Abortion	Nil	—	—
Other maternal causes	Nil	—	—

Excess of deaths over births	288

General

Area of the City in Acres		27,255
Number of persons per acre		19·47
Number of occupied structurally separate dwellings (Census 1971)		182,715
Persons per occupied structurally separate dwelling (Census 1971)		2·98
Number of houses according to Rate Book (1st April, 1973)		170,070
Persons per house		3·12
Rateable value (1st April, 1973)		£71,018,121
Sum represented by a penny rate (estimated)		£680,000
Number of new houses erected during 1973:—		
By local authority	2,632	
By other agencies or persons	652	3,284

PROTECTIVE HEALTH SERVICES

General Statistics—Provisional

(Figures compiled in the Department)

Population:—

Registrar General's estimated population mid-year, 1973			
	Males	257,616	
	Females	272,964	530,580
Census population, 1971	Males	263,625	
	Females	280,025	543,650

Deaths:—

Number of deaths	Males	3,611	
	Females	3,565	7,176
Death rate per 1,000 of population	Males	14·02	
	Females	13·06	13·52
Comparability factor			1·07
Death rate as adjusted by factor			14·47
Percentage of mortality occurring in institutions			59·73

Births:—

		Males	Females	Total	
Live births	Legitimate	2,870	2,559	5,429	
	Illegitimate	698	691	1,389	6,818
Live birth rate per 1,000 of population					12·85
Comparability factor					1·05
Birth rate as adjusted by factor					13·49
Illegitimate live births per cent of total live births					20·37

		Males	Females	Total	
Stillbirths	Legitimate	37	35	72	
	Illegitimate	12	4	16	88
Total live and stillbirths					6,906
Stillbirth rate per 1,000 total births (live and still)					12·74

Infant mortality:—

Deaths of all infants under one year	151
Rate per 1,000 total live births	22·15
Deaths of legitimate infants under one year	111
Rate per 1,000 legitimate live births	20·45
Deaths of illegitimate infants under one year	40
Rate per 1,000 illegitimate live births	28·80

Neonatal mortality:—

Deaths of infants under four weeks	99
Rate per 1,000 total live births	14·52

Early neonatal mortality:—

Deaths of infants under one week	91
Rate per 1,000 total live births	13·35

Post-neonatal mortality:—

Deaths of infants over four weeks and under one year	52
Rate per 1,000 total live births	7·63

Perinatal mortality:—

Stillbirths and deaths of infants under one week	179
Rate per 1,000 total births (live and still)	25·92

Maternal mortality:—

	Deaths	Rate per 1,000 of total births	
Abortion	Nil	—	—
Other maternal causes	Nil	—	—

Excess of deaths over births	358

General

Area of the City in Acres		27,255
Number of persons per acre		19·47
Number of occupied structurally separate dwellings (Census 1971)		182,715
Persons per occupied structurally separate dwelling (Census 1971)		2·98
Number of houses according to Rate Book (1st April, 1973)		170,070
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Rateable value (1st April, 1973)		£71,018,121
Sum represented by a penny rate (estimated)		£680,000
Number of new houses erected during 1973:—		
By local authority	2,632	
By other agencies or persons	652	3,284

Meteorology

The following summary of the weather in Manchester during the year 1973 has been provided by the meteorological officer in charge of the Manchester Weather Centre:—

	TEMPERATURE						RAINFALL				
	Mean	Diff. from Av. (1931–60)	Warmest Day		Coldest Night		Total	Diff. from Av. (1931–60)	Wettest Day		Wet Days ·04″
			Date	Max.	Date	Min.			Date	Amt.	
	°C.	°C.		°C.		°C.	ins.	ins.		ins.	
Jan.	5·8	+1·7	24th	11·0	18th	—2·5	2·10	—1·22	26th	0·67	9
Feb.	5·5	+1·2	1st	11·0	15th	—4·2	2·63	+0·18	8th	0·49	12
Mar.	7·7	+1·2	23rd	17·3	14th	1·6	1·31	—0·59	3rd	0·34	10
Apr.	7·5	—1·4	25th	16·9	9th	—2·1	2·52	+0·57	1st	0·80	9
May	12·1	+0·1	27th	23·5	2nd	3·7	3·07	+0·57	3rd	0·48	13
June	15·8	+0·8	21st	25·0	1st	6·3	0·83	—1·56	19th	0·34	4
July	16·5	0·0	5th	26·6	24th	8·8	4·42	+1·27	15th	1·14	10
Aug.	17·3	+1·0	15th	29·7	7th	10·5	4·09	+0·63	5th	1·79	11
Sept.	14·9	+0·8	8th	25·7	27th	6·4	2·97	+0·09	27th	0·63	10
Oct.	10·5	0·0	2nd	19·7	17th	1·8	2·61	—0·83	18th	0·48	12
Nov.	6·9	—0·2	4th	15·7	30th	—3·0	2·39	—0·94	9th	1·08	13
Dec.	5·6	+0·5	29th	11·0	1st	—2·2	4·13	+1·11	7th	0·69	19
Year	10·5	+0·4	15/8	29·7	15/2	—4·2	33·07	—0·72	5/8	1·79	132

	SUNSHINE				EXTREME WINDS						
	Total	Diff. from Av. (1931–60)	Sunniest Day		Highest Hourly Wind				Highest Gust		
			Date	Amt.	Dir.	Speed	Hour ended at		Speed	Day and Time	
	hrs.	hrs.		hrs.	degs.	kts.	Day	hr.	kts.	Day	Time
Jan.	27	—4	16th	5·4	190 270	18	14th 26th	1100 2200	32	14th	1026
Feb.	71	+22	24th	9·1	230	23	13th	0300	50	22nd	1756
Mar.	110	+17	23rd	9·9	230	18	3rd	0600	33	6th 6th	0756 0950
April	145	+17	29th	12·4	270 270	24	6th 6th	0900 1500	52	6th	1520
May	152	—22	14th	14·2	260	26	10th	1700	49	10th	1614
June	182	+7	5th	14·3	230	20	12th	1700	39	13th	0214
July	131	—22	5th	11·4	280 270	16	22nd	1300 1500	31	22nd	1214 1450
Aug.	184	+43	15th	13·1	240 240	27	6th	1500 1600	49	6th	1550
Sept.	111	+2	12th	10·2	190	20	27th	1900	40	27th	1808
Oct.	83	+3	11th	8·8	260	27	20th	2000	46	20th	1908
Nov.	71	+30	26th	7·1	270	28	24th	1200	55	24th	1227
Dec.	40	+12	1st	6·4	320	28	13th	1900	51	13th	1702
Year	1307	+105	5/6	14·3	270 320	28 28	24/11 13/12	1200 1900	55	24/11	1227

Vital Statistics
Causes of Death by Age
(Provisional figures compiled in the department)

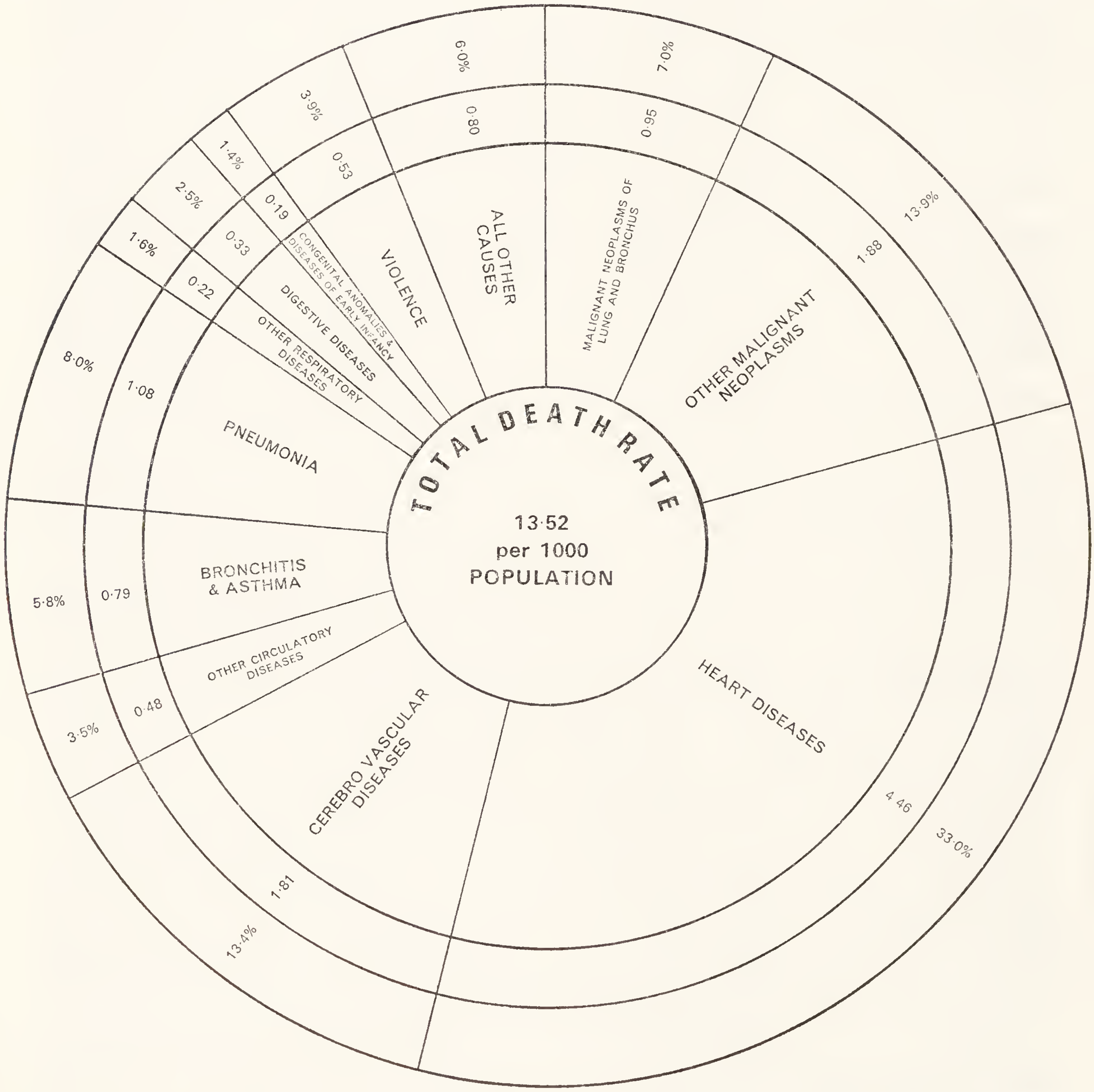
Causes of Death	Sex	All ages	Under four weeks	Four weeks and under 1 year	Age in Years								
					1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75 and over
Bacillary dysentery, amoebiasis ...	M	1	—	—	—	1	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhoeal unspecified	M	2	—	1	1	—	—	—	—	—	—	—	—
	F	7	1	1	—	—	—	—	—	—	—	—	5
Tuberculosis respiratory	M	17	—	—	—	—	—	—	2	6	5	2	2
	F	7	—	—	—	—	—	—	—	—	—	3	4
Other tuberculosis, including late effects	M	3	—	—	—	—	—	—	—	—	1	1	1
	F	3	—	—	—	—	—	—	—	1	1	—	1
Meningococcal infection	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	3	—	—	2	1	—	—	—	—	—	—	—
Other bacterial and viral diseases ...	M	2	—	—	—	—	—	1	—	1	—	—	—
	F	3	1	—	—	—	1	—	—	—	1	—	—
Syphilis and its sequelae	M	1	—	—	—	—	—	—	—	—	1	—	—
	F	1	—	—	—	—	—	—	—	—	—	1	—
Other infective and parasitic diseases	M	2	—	—	—	—	—	—	1	—	1	—	—
	F	1	—	—	—	—	—	—	—	1	—	—	—
Malignant neoplasm, buccal cavity etc.	M	18	—	—	—	—	—	—	2	3	7	4	2
	F	6	—	—	—	—	—	—	2	—	1	2	1
Malignant neoplasm, oesophagus	M	29	—	—	—	—	—	—	—	2	8	12	7
	F	19	—	—	—	—	—	—	2	1	3	7	6
Malignant neoplasm, stomach ...	M	90	—	—	—	—	1	—	5	11	24	33	16
	F	84	—	—	—	—	—	1	—	5	10	28	40
Malignant neoplasm, intestine except rectum	M	51	—	—	—	—	—	—	1	6	9	25	10
	F	82	—	—	—	—	—	1	1	7	14	26	33
Malignant neoplasm rectum, etc. ...	M	43	—	—	—	—	—	1	1	7	9	18	7
	F	33	—	—	—	—	—	—	1	7	3	9	13
Malignant neoplasm, larynx	M	13	—	—	—	—	—	—	—	2	3	7	1
	F	4	—	—	—	—	—	—	—	—	—	2	2
Malignant neoplasm, trachea, bronchus and lung	M	415	—	—	—	—	—	1	7	46	130	162	69
	F	89	—	—	—	—	—	—	3	19	22	28	17
Malignant neoplasm, breast	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	125	—	—	—	—	—	2	7	26	26	35	29
Malignant neoplasm, uterine cervix ...	F	28	—	—	—	—	—	—	2	7	8	6	5
Malignant neoplasm, body of uterus ...	F	11	—	—	—	—	—	—	—	—	3	3	5
Malignant neoplasm, prostate ...	M	31	—	—	—	—	—	—	—	—	4	12	15
Other malignant neoplasms, etc. ...	M	125	—	—	—	3	2	1	3	8	27	50	31
	F	178	—	—	—	4	1	1	3	22	32	53	62
Leukaemia	M	16	—	—	—	—	2	1	4	2	2	3	2
	F	12	—	—	—	2	1	—	—	1	1	3	4
Other malignant blood disorders, etc.	M	21	—	—	—	—	—	—	3	6	3	7	2
	F	11	—	—	—	—	—	—	—	—	1	7	3
Benign and unspecified neoplasms ...	M	1	—	—	—	—	—	1	—	—	—	—	—
	F	5	—	—	—	—	—	—	—	—	—	4	1
Diabetus mellitus	M	19	—	—	—	—	—	—	3	1	5	6	4
	F	34	—	—	—	—	—	—	—	—	1	15	18
Other endocrine nutritional and metabolic diseases	M	3	—	—	—	—	—	—	1	—	1	1	—
	F	11	—	—	—	1	—	—	—	—	2	4	4
Blood diseases	M	9	1	—	—	—	—	—	—	—	2	3	3
	F	11	—	—	—	—	—	—	—	—	—	1	10
Mental disorders	M	7	—	—	—	—	—	1	2	—	2	1	1
	F	13	—	—	—	—	—	—	—	—	—	—	13
Meningitis	M	3	—	—	—	—	—	—	—	2	—	1	—
	F	2	1	—	—	—	—	—	—	—	—	1	—
Other diseases of nervous system, etc.	M	26	—	1	1	—	3	—	2	5	3	7	4
	F	26	—	2	2	—	1	2	—	5	3	6	5
Active rheumatic fever	M	6	—	—	—	1	—	—	—	—	2	2	1
	F	7	—	—	—	—	—	—	—	—	1	3	3

Causes of Death by Age
(Provisional figures compiled in the department)—*continued*

Causes of Death	Sex	All ages	Under four weeks	Four weeks and under 1 year	Age in Years								
					1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75 and over
Chronic rheumatic heart disease ...	M	34	—	—	—	—	—	—	2	6	10	11	5
	F	60	—	—	—	—	—	—	4	9	11	20	16
Hypertensive disease	M	28	—	—	—	—	—	1	2	7	7	7	4
	F	42	—	—	—	—	—	—	1	2	6	13	20
Ischaemic heart disease	M	1044	—	—	—	—	2	4	26	124	255	395	238
	F	801	—	—	—	—	—	—	2	33	91	222	453
Other forms of heart disease	M	124	1	—	—	—	—	1	1	8	12	31	70
	F	222	—	—	1	—	—	1	—	5	5	43	167
Cerebrovascular disease	M	375	—	2	1	1	—	1	7	22	56	138	147
	F	585	—	—	1	—	1	1	6	15	40	130	391
Other diseases of circulatory system	M	105	—	—	—	—	—	1	3	5	24	36	36
	F	148	—	—	—	—	—	—	1	4	13	35	95
Acute respiratory infections	M	17	—	4	1	—	—	2	—	—	1	4	5
	F	8	—	6	—	—	—	—	—	—	—	—	2
Influenza	M	7	—	—	—	—	—	—	—	—	1	1	5
	F	12	—	—	—	—	—	—	—	—	1	2	9
Pneumonia	M	232	2	4	—	—	—	1	5	10	21	69	120
	F	339	—	6	2	1	1	—	1	2	18	62	246
Bronchitis, etc.	M	279	—	—	1	—	—	1	3	15	46	110	103
	F	140	—	—	—	—	—	—	2	4	15	43	76
Other diseases of respiratory system	M	39	—	—	—	—	—	—	—	4	8	15	12
	F	32	—	—	—	—	—	—	1	3	5	9	14
Peptic ulcer	M	28	—	—	—	—	—	—	—	2	5	12	9
	F	16	—	—	—	—	—	—	—	2	2	3	9
Intestinal obstruction and hernia ...	M	15	1	—	—	—	—	—	2	—	—	6	6
	F	10	—	—	—	—	—	—	—	—	—	2	8
Cirrhosis of liver	M	11	—	—	—	—	—	—	—	4	3	4	—
	F	10	—	—	—	1	—	—	1	2	2	2	2
Other diseases of digestive system ...	M	31	—	1	1	—	—	1	—	4	6	11	7
	F	56	—	—	—	—	—	2	1	2	4	15	32
Nephritis and nephrosis	M	17	—	—	—	—	—	1	—	3	5	2	6
	F	14	—	—	—	1	—	1	—	2	3	3	4
Infections of kidney, etc.	M	8	—	—	—	—	—	—	—	—	1	2	5
	F	13	—	—	—	—	—	—	—	—	4	2	7
Hyperplasia of prostate...	M	12	—	—	—	—	—	—	—	—	—	3	9
Other diseases of genito urinary system	M	7	—	—	—	—	—	—	—	1	1	2	3
	F	13	—	—	—	—	—	—	—	—	4	2	7
Diseases of skin and musculo-skeletal diseases, etc.	M	6	—	—	—	—	—	—	—	—	2	1	3
	F	14	—	—	—	—	1	—	—	—	1	3	9
Congenital anomalies	M	14	8	3	1	2	—	—	—	—	—	—	—
	F	15	9	3	2	—	—	—	—	1	—	—	—
Perinatal conditions	M	48	48	—	—	—	—	—	—	—	—	—	—
	F	25	25	—	—	—	—	—	—	—	—	—	—
Symptoms and ill-defined conditions	M	19	—	9	—	—	—	—	—	—	—	—	10
	F	49	—	7	—	—	—	—	1	—	1	1	39
Motor vehicle accidents	M	53	—	—	1	4	18	5	4	5	3	7	6
	F	31	—	—	2	2	3	2	2	2	4	8	6
All other accidents	M	57	—	1	3	6	11	7	5	6	5	5	8
	F	73	1	1	2	2	3	3	—	2	7	11	41
Suicide and self-inflicted injuries ...	M	41	—	—	—	1	3	1	8	15	4	7	2
	F	16	—	—	—	—	—	—	3	2	6	4	1
All other external causes	M	6	—	—	1	—	2	1	1	1	—	—	—
	F	5	—	—	—	—	1	1	—	1	—	—	2
Total all causes	M	3,611	61	26	12	19	44	35	106	350	725	1,236	997
	F	3,565	38	26	14	15	14	18	47	195	376	882	1,940
Grand total	All	7,176	99	52	26	34	58	53	153	545	1,101	2,118	2,937

DEATHS FROM PRINCIPAL CAUSES

RATE per 1000 POPULATION
AND
PERCENTAGE of TOTAL DEATHS



Deaths in age groups and percentages of total deaths

Year	Total number of deaths	Age groups and percentages									
		0—		1—4		5—44		45—64		65—	
		No.	%	No.	%	No.	%	No.	%	No.	%
1901 ..	11,801	3,114	26·39	1,676	14·20	2,725	23·09	2,627	22·26	1,659	14·06
1911 ..	12,272	2,901	23·64	1,516	12·35	2,711	22·09	2,790	22·74	2,354	19·18
1921 ..	10,093	1,707	16·91	728	7·21	2,313	22·92	2,687	26·62	2,658	26·34
1931 ..	10,618	1,027	9·67	503	4·74	1,943	18·30	3,144	29·61	4,001	37·68
1941 ..	10,016	832	8·31	265	2·65	1,467	14·65	2,886	28·81	4,566	45·58
1951 ..	9.676	439	4·54	64	0·66	748	7·73	2,568	26·54	5,857	60·53
1961 ..	8,910	388	4·35	36	0·40	457	5·13	2,369	26·59	5,660	63·53
1964 ..	7,715	382	4·95	38	0·49	421	5·46	2,082	26·99	4,792	62·11
1965 ..	7,866	337	4·29	43	0·55	421	5·35	2,172	27·61	4,893	62·20
1966 ..	7,844	306	3·90	50	0·64	358	4·56	2,071	26·40	5,059	64·50
1967 ..	7,751	258	3·33	50	0·65	381	4·92	1,994	25·72	5,068	65·38
1968 ..	7,646	283	3·70	46	0·60	337	4·40	1,932	25·27	5,048	66·03
1969 ..	7,543	290	3·84	51	0·68	332	4·40	1,930	25·59	4,940	65·49
1970 ..	7,417	219	2·95	43	0·58	349	4·71	1,904	25·67	4,902	66·09
1971 ..	7,132	210	2·94	26	0·37	314	4·40	1,781	24·97	4,801	67·32
1972 ..	7,207	172	2·39	40	0·56	299	4·15	1,829	25·38	4,867	67·52
1973* ..	7,176	151	2·11	26	0·36	298	4·15	1,646	22·94	5,055	70·44

*Provisional (figures compiled in the department)

Ward population, births and deaths

(Figures compiled in the department)

Wards	Estimated population	Live births				Deaths		Deaths under one year of age			Infant mortality per 1,000 live births
		Legitimate	Illegitimate	Totals	Rate per 1,000 population	Totals	Rate per 1,000 population	Legitimate	Illegitimate	Totals	
City of Manchester	530,580	5,429	1,389	6,818	12·85	7,176	13·52	111	40	151	22·15
Alexandra	18,201	176	71	247	13·57	166	9·12	3	2	5	20·24
Ardwick	10,809	145	50	195	18·04	212	19·61	3	3	6	30·77
Baguley	19,330	185	42	227	11·74	254	13·14	4	2	6	26·43
Barlow Moor	16,311	90	36	126	7·72	190	11·65	3	1	4	31·75
Beswick	11,736	198	61	259	22·07	202	17·21	4	3	7	27·03
Blackley	16,416	115	25	140	8·53	273	16·63	3	1	4	28·57
Bradford	21,134	280	56	336	15·90	352	16·66	5	—	5	14·88
Brooklands	19,147	132	28	160	8·36	203	10·60	1		1	6·25
Burnage	17,596	106	16	122	6·93	221	12·60	3	1	4	32·79
Charlestown	13,957	86	18	104	7·45	185	13·25	1	—	1	9·62
Cheetham	13,003	273	88	361	27·76	188	14·46	7	4	11	30·47
Chorlton	17,040	191	37	228	13·38	234	13·73	4	—	4	17·54
Collegiate Church	6,725	40	13	53	7·88	109	16·21	1	—	1	18·87
Crossacres	20,271	185	62	247	12·18	206	10·16	4	1	5	20·24
Crumpsall	18,590	190	38	228	12·26	271	14·58	2	2	4	17·54
Didsbury	19,027	168	16	184	9·67	280	14·72	2	—	2	10·87
Gorton North	16,544	198	25	223	13·48	229	13·84	4	—	4	17·94
Gorton South	12,935	99	32	131	10·13	211	16·31	5	1	6	45·80
Harpurhey	11,074	110	17	127	11·47	155	14·00	3	—	3	23·62
Hulme	14,190	141	118	259	18·25	190	13·39	3	1	4	15·44
Levenshulme	20,274	268	39	307	15·14	306	15·09	4	—	4	13·03
Lightbowne	17,062	197	26	223	13·07	219	12·84	5	1	6	26·91
Lloyd Street	19,597	225	66	291	14·85	244	12·45	7	4	11	37·80
Longsight	18,045	289	86	375	20·78	235	13·02	8	3	11	29·33
Miles Platting	14,095	177	66	243	17·24	223	15·82	4	1	5	20·58
Moston	14,558	150	12	162	11·13	240	16·49	—	—	—	—
Moss Side	9,489	85	55	140	14·75	76	8·01	1	3	4	28·57
Newton Heath	14,758	125	27	152	10·30	253	17·14	2	1	3	19·74
Northenden	18,024	135	37	172	9·54	225	12·48	4	2	6	34·88
Old Moat	15,760	113	22	135	8·57	194	12·31	1	—	1	7·41
Rusholme	20,692	192	38	230	11·12	230	11·12	3	1	4	17·39
Withington	17,709	154	16	170	9·60	200	11·29	1	1	2	11·76
Woodhouse Park	16,481	211	50	261	15·84	200	12·14	6	1	7	26·82

Infectious Disease and Epidemiology

Incidence of infectious disease (excluding tuberculosis, which is to be found on page 233) in the City, compared with the previous year and the average of the ten years, is shown in the following table:—

Disease	**1973**	1972	10 year Average 1964–1973
Anthrax	—	—	—
Cholera	—	—	—
Diphtheria	—	—	—
Dysentery	185	184	381
Encephalitis	1	1	2
Food poisoning	167	177	183
Infective jaundice (notifiable from 1st February, 1966)	180	247	372
Leprosy	—	—	—
Leptospirosis (notifiable from 1st October, 1966)	1	—	—
Malaria	—	—	—
Measles	422	2,529	2,797
Meningitis	44	53	39
Ophthalmia neonatorum	17	18	24
Paratyphoid	—	—	3
Pemphigus neonatorum	—	1	—
Plague	—	—	—
Poliomyelitis (acute)	—	—	—
Relapsing fever	—	—	—
Rubella	737	1,206	1,047
Scarlet fever	167	163	212
Smallpox	—	—	—
Tetanus (notifiable from 1st October, 1966) ..	—	—	—
Typhoid	2	3	4
Typhus	—	—	—
Whooping cough	29	30	393
Yellow fever (notifiable from 1st October, 1968) ..	—	—	—

Anthrax

The last case occurred in Manchester in 1967.

Diphtheria

There were no cases.

Dysentery

185 cases with 1 death.

Encephalitis (acute)

1 case with no deaths.

Food poisoning

For details see page 83.

Infantile gastro-enteritis

194 cases with 5 deaths.

The cases of infantile gastro-enteritis were notified voluntarily by local children's hospitals, under the scheme instituted in 1969, and discussed in the annual report for that year. There were five deaths from this disease; the youngest was a child of three weeks, and the oldest a child of eleven months.

The monthly distribution of cases and deaths (in parenthesis) was as follows:—

January	19	May	13	September	14
February	16	June	19	October	13
March	12	July	13 (3)	November	24 (1)
April	12 (1)	August	19	December	20

In 1972, there were 334 cases of infantile gastro-enteritis with five deaths.

The home circumstances of all cases were investigated jointly by a health visitor and public health inspector.

Infective jaundice

180 cases with no deaths.

The number of cases notified in 1972 was 247. The monthly distribution of cases was as follows:—

January	16	May	23	September	11
February	24	June	11	October	15
March	12	July	13	November	22
April	17	August	9	December	7

Influenza

There were 19 deaths from influenza compared with 36 in the previous year. The majority occurred at the beginning of the year.

The 19 deaths were all over 55 years of age.

Influenza and other Myxovirus Infections in Manchester 1970–73

The following report on influenza and other myxovirus infections in Manchester 1970–73 has been provided by Dr. J. O'H. Tobin, Director of the Public Health Laboratory at Withington Hospital.

"Some influenza was present in Manchester during 1973. The epidemic, which started in November 1972, continued over the holiday period and into January, when the highest number of sickness claims for that winter were made. Since then influenza A was absent until a single case was diagnosed towards the end of December, but no virus was isolated until January 1974. A small outbreak of influenza B occurred in mid-summer, mainly amongst school children.

The incidence of influenza for the last four years is given in the Figure, and as can be seen, three of the epidemics occurred during the winter months and one outbreak during the summer of 1971. No influenza was observed in the 1970–71 winter. The winter epidemics were associated with rises in the number of sickness benefit claims, whereas in the spring and summer epidemics of 1971, due to both A and B viruses, only a small though definite increase was noted during their prevalence. The other influenza B outbreaks, which were mainly mid-summer, were not associated with an increase in claims because most of the adult population is immune to this agent and the virus infections occurred mainly in school children.

The increase in claims in January 1971, were not due to influenza, but probably to a mixture of parainfluenza and respiratory syncytial viruses, all of which were especially prevalent during that winter. Parainfluenza virus infections occurred throughout the period noted, with peaks not necessarily confined to the winter months. Parainfluenza virus type 3 often has its main incidence in the summer, although parainfluenza virus type 1, which probably causes more serious clinical disease and tends to occur in epidemics, is more restricted to the winter time.

Respiratory syncytial virus occurred every winter during the last four years, and 1973 has been no exception. This important virus disease as far as babies and infants are concerned, does not seem to be diminishing over the years, and is the main cause of hospital admissions for respiratory disease in the first year of life. The strains of influenza A (H2N3) have been changing over this period, those being prevalent for the first two years being the original Hong Kong (HK) variant of the old Asian (H2A2) strains, those in 1972 and early 1973 being variants of this HK virus, the so called England 42/72 strain, and those prevalent at the end of 1973 and early 1974, the so called New Zealand strains. The latter have been causing epidemics in Australasia and Asia for the last year or so. However, although their antigenic make-up has changed, antibody tests show that there is a close enough relation between them that most adults at the moment in this area have antibodies to the 42/72 strain, and it is probable that they will get substantial short-term protection against the new New Zealand variants.

The influenza B strains were the same from 1970–1972, but in 1973 there was some change in the antigenic make-up. However, again, the antibodies in adults to the old strains are fairly high and adequate protection to the new strains should be possessed by the majority of individuals. Most of the infections with this virus are likely to occur in school children".

Measles

422 cases with no deaths.

The following table shows the number of notifications for the last six years.

Year	1968	1969	1970	1971	1972	**1973**
No.	2,777	2,560	2,905	1,253	2,529	422

The quarterly distribution of these 422 notifications was:—

1st quarter	152
2nd quarter	37
3rd quarter	81
4th quarter	152

The age distribution of notifications was:—

Age groups (years)	Per cent of total notifications
Under 1	6·4
1–4	50·7
5–9	38·2
10 and over	4·7

The age/specific morbidity rates were:—

Age (years)	Rate per 1,000 population
Under 5	6·2
5–14	2·0

Meningitis (acute)

44 cases with 4 deaths.

Of the 44 notifications of meningitis, 20 were meningococcal, 11 were other specified organisms, and 13 were unspecified organisms.

Of the four deaths, three were due to meningococcal infection, and one was due to viral meningitis.

Poliomyelitis

There were no cases.

The last case occurred in Manchester in 1962.

Rubella (German measles)

737 cases with no deaths.

There were 1,206 cases in 1972. The average for the past ten years is 1,047.

Of the total number of notifications, 352 were for males and 385 for females. 76% of the total notifications occurred in the period February to July inclusive with a peak of 135 notifications in May. Of the female notifications 73% were ten years of age and under. There were three female notifications over the age of 30.

The age/specific female morbidity rates were:—

Age group (years)	Rate per 1,000 population
0–5	8·41
6–15	3·73
over 15	0·30

Scarlet fever

167 cases with no deaths.

The number of cases in 1972 was 163. The average for the past ten years is 212.

Smallpox

There were no cases.

Tetanus

There were no cases.

Typhoid

2 cases and no deaths.

Case 1

On 7th August, 1973 a 23 year old Pakistani woman was confirmed to be a case of typhoid fever by both blood and faeces culture. Subsequently her two children and a Pakistani guest were also found to be excreting typhoid organisms and were admitted to hospital. As a precaution the hospital authorities also agreed to admit the father. All the members of the family and the guest had lived in this country for several years and had not been abroad since. With the exception of the case, none of the other persons admitted to hospital were ill at any time. All persons admitted to hospital had been discharged by early September and were placed under routine surveillance. However faeces culture from the Pakistani guest during his stay in hospital was positive for typhoid organisms and it was therefore assumed that he was an intestinal carrier. Arrangements were made for a prolonged course of ampicillin to be administered in an attempt to eliminate his carrier state and he was still receiving this treatment at the end of the year. All other members of the household had submitted a number of negative faeces specimens by the end of the year.

The initial inspection of the household revealed a drain that had been blocked and had overflowed into the back yard for a period of two months at least. The surface of the yard was covered in debris and a drain swab was found to be positive for typhoid organisms. Immediate action was taken to remedy this defect.

None of the members of the family or the guest gave any evidence of having received T.A.B. immunisation in the past. The typhoid organism was Vi phage type 0 in all instances.

Case 2

A Pakistani father, mother and five children returned from a stay in Pakistan on 5th November, 1973. On 8th November a six year old son developed acute gastro-intestinal symptoms with pyrexia. In spite of treatment by the family doctor the boy's situation worsened and he was admitted to Monsall Infectious Diseases Hospital on 17th November, 1973. Within a few days typhoid organisms were isolated from both blood and faeces specimens. Investigation of the household revealed that three other siblings were suffering from gastro-intestinal upset and consequently they also were admitted to Monsall Hospital. While bacteriological investigations did not reveal the presence of typhoid organisms a Shigella flexneri organism, type 6, was isolated from their faeces specimens. It transpired that there were also eight other persons including three children who were close contacts of this family. One of these contacts, a 22 year old male, had not been traced by the end of the year. Widal tests on, and faeces specimens from, the other seven contacts were negative. The case was discharged from hospital on 17th December, 1973 after having submitted twelve negative faeces specimens.

A two year old child who was one of the close contacts was found to be a symptomless excreter of a type 6 Shigella flexneri organism. All four children who were found to be excreting Shigella flexneri organisms have since submitted at least one negative faeces specimen.

Neither the case nor any of the contacts appeared to have received T.A.B. immunisation. The typhoid organism isolated was Vi phage type B2.

Paratyphoid

There were no cases.

Whooping cough

29 cases and no deaths.

This is the lowest number ever recorded in Manchester. The number of cases in 1972 was 30. The average for the past ten years is 393.

Consultations

Medical Officers of the department were actively engaged in the investigation of many of the cases noted. Requests for consultation were received from hospitals, general practitioners and nurseries. Technical help was readily available from the staff of the Public Health Laboratory, Manchester, and a large amount of work was carried out by this laboratory as part of the investigations into the cases of meningococcal meningitis, typhoid, dysentery and food poisoning referred to elsewhere in this report.

Immunization

Present recommended ages for immunization

Age	Immunization against	
5 months	Diphtheria, whooping cough, tetanus and poliomyelitis	dose 1
6½ months	Diphtheria, whooping cough, tetanus and poliomyelitis	dose 2
12½ months	Diphtheria, whooping cough, tetanus and poliomyelitis	dose 3
1 year 3 months . .	Measles	
School entry	Diphtheria, tetanus and poliomyelitis (for children fully immunized previously)	booster
11–14 years (girls only)	Rubella	
13 years	Tuberculosis (with B.C.G.)	

Since 1967, the Corporation's computer has been used in the preparation of the immunization programme.

Each child's date of birth and the immunization procedures to which the parents have consented are recorded by the computer; from this information the computer subsequently issues, at the appropriate intervals of time, an appointment card to remind the parents to take the child for immunization to the clinic of their choice.

If the appointment is not kept, the computer prepares another appointment and eventually, if three appointments are not kept, the child's name appears on a list of non-attenders. Arrangements are then made for the health visitor for the district to visit the family to ascertain whether the parents still wish their child to be immunized and if so a further series of appointments are made. In the case of a mother having difficulty in attending the child health centre, the mobile immunization unit is asked to call.

Every immunization procedure a child receives is recorded by the computer, so that a complete record is built up of each child's immunization history.

Diphtheria, Whooping Cough, Tetanus and Poliomyelitis

Primary immunizations completed by 31st December, 1973, of children born in 1968, 1969, 1970 and 1971

	Year of birth	1968	1969	1970	**1971**
	Number of live births	10,736	9,997	9,419	8,930
Diphtheria	Number immunized	8,413	7,869	6,376	5,676
	Number immunized as percentage of live births	78	78	68	64
Whooping cough	Number immunized	7,211	7,084	5,987	5,464
	Number immunized as percentage of live births	67	71	63	61
Tetanus	Number immunized	8,511	7,871	6,374	5,677
	Number immunized as percentage of live births	79	78	68	64
Poliomyelitis	Number immunized	7,487	7,335	6,321	5,672
	Number immunized as percentage of live births	69	73	67	64

The above table indicates that, as in previous years, the percentage of children immunized of those born in any one year increases in direct proportion to the number of years that have elapsed since the year of birth. However, during the diphtheria outbreak in 1971, the number of children born in 1969 who were immunized in 1971 was higher than average and this accounts for the apparent anomaly.

The following table gives details of the number of booster doses given to school children for the years, 1970, 1971, 1972 and 1973.

Antigen	**1973**	1972	1971	1970
Diphtheria/tetanus	4,724	3,066[1]	60,550[2]	4,464
Poliomyelitis	4,489	2,896[1]	3,387[2]	4,397

1. Due to difficulties arising from the transfer of work to a new computer it was not possible to carry out a full years programme.
2. The large number of booster diphtheria/tetanus immunizations carried out in 1971 was due to the diphtheria outbreak during the early part of that year.

Measles

Immunizations completed by 31st December, 1973, of children born in 1968, 1969, 1970 and 1971

Year of birth	1968	1969	1970	1971
Number of live births	10,736	9,997	9,419	8,930
Number immunized	3,508	3,785	3,987	3,692
Number immunized as percentage of live births	32	38	42	41

Mobile immunization unit

Work of the mobile immunization unit in 1972 and 1973

Nature of immunization	Number of persons immunized	
	1973	1972
Diphtheria, whooping cough and tetanus ..	971	1,305
Diphtheria and tetanus	49	116
Measles	830	715
Poliomyelitis	1,035	1,438
Totals	2,885	3,574

The fall in the numbers immunized on the Mobile Immunization Unit is mainly due to the continuing reduction in the number of births.

Defaulters constitute the major source of the work of the Mobile Immunization unit. In the period of two years since the diphtheria outbreak there has been increasing apathy on the part of these parents to have their children immunized.

Rubella

The vaccination programme for the immunization of schoolgirls between the ages of 11 and 14 years was carried out between January and March: the following table compares 1973 and 1972.

Category	1972		**1973**	
	Number	Percentage acceptance from girls eligible	Number	Percentage acceptance from girls eligible
Schoolgirls eligible ..	6,157	—	6,714	—
Schoolgirls for whom consents were received ..	4,090	66	5,283	79
Schoolgirls immunized ..	3,902	63	5,005	75

Primary immunizations carried out at various clinics

Immunization centre	Numbers of immunizations with each type of antigen								Totals	Percentage immunized at each centre
	Diphtheria, whooping cough and tetanus combined	Diphtheria and tetanus combined	Diphtheria	Whooping cough	Tetanus	Poliomyelitis	Rubella	Measles		
Child health centres ..	3,762	169	4	—	1	3,961	—	3,016	10,913	51·7
Day nurseries	54	7	—	—	—	62	—	51	174	0·8
Schools and school clinics	6	398	1	—	—	458	5,005	—	5,868	27·8
Mobile immunization unit..	968	40	—	—	1	1,027	—	830	2,866	13·6
General practitioners ..	442	32	—	1	19	458	8	243	1,203	5·7
Hospitals	2	4	—	—	6	7	—	—	19	0·1
Outside Manchester ..	35	1	—	—	—	30	—	5	71	0·3
Totals	5,269	651	5	1	27	6,003	5,013	4,145	21,114	100·0

B.C.G.

The arrangements for the immunization of child contacts of tuberculosis, newly arrived immigrant children and school children continued.

Child contacts

Sessions for child contact surveillance were held at the Manchester Chest Clinic and in schools.

The following table gives the relevant details:

Number of persons	Contact scheme		
	Health department	Schools	Totals
Skin tested	874	2,973	3,847
Found positive	368	586	954
Found negative	443	2,282	2,725
Immunized	491	99	590

The number of immunizations carried out by the Health Department at the Manchester Chest Clinic is in excess of the number found to be negative on skin testing, because the 491 children immunized includes children who were skin tested elsewhere and also new born babies.

Immigrants

Under the arrangements whereby newly arrived immigrants, under 21 years of age, are given appointments to attend the chest clinic sessions, a total of 157 attended for Heaf testing. Of these, 47 were negative and given the B.C.G. vaccination; 105 persons who showed a positive reaction were referred for X-ray. Some of these were stated to have received B.C.G. before arrival in this country; 17 persons failed to return for the result of their Heaf test to be read.

There were no immigrants referred for second X-rays, or clinical examinations.

School children

Routine immunization against tuberculosis is offered to all school children when they reach 13 years of age. The annual immunization programme was carried out during the school autumn term.

The following table gives the relevant details compared with 1972.

Category	**1973**		1972	
	Number	Percentage acceptance from children eligible	Number	Percentage acceptance from children eligible
School children eligible ..	8,371	—	9,031	—
School children for whom consent was received	7,245	87%	7,719	85%
School children skin tested by 31st December, 1973 ..	6,672*	80%	7,561	84%

*Programme not complete by 31st December, 1973.

Influenza

In accordance with the recommendation of previous years from the Department of Health and Social Security, that influenza vaccine should only be offered to priority groups, 2,642 persons were immunized.

Immunization for persons travelling abroad

The following table shows details of immunizations given in the Health Department clinic in 1972 and 1973:

Antigen	1972	**1973**
Yellow fever	2,651	2,659
Cholera	734	1,334
Typhoid	140	98
Smallpox	169	894

International vaccination certificates

In addition to the 2,659 yellow fever vaccination certificates and 1,334 cholera vaccination certificates issued from the Health Department, 25,666 smallpox and cholera vaccination certificates issued by medical practitioners were authenticated in accordance with the International Health Regulations.

Venereal Diseases

I am indebted to Dr. Leslie Watt, consultant venereologist and physician-in-charge St. Luke's Clinic, for the following report:

The lack of information regarding the facilities offered by venereal disease clinics is frequently a point of criticism. For generations the virtual sum total of the information on the situation and times of the clinics has been on posters exhibited in public toilets. These posters, often defaced and requiring frequent renewal have done nothing to remedy the ''dirty'' image of sexually transmissible infections. Recently a more enlightened approach has been evident but there is still considerable reluctance outside purely medical establishments to display posters and otherwise to participate in publicising the clinics.

In common with other densely populated areas a telephone answering machine has been installed in the clinics in Manchester and if the number 061-832 4499 is dialled day or night, a recorded message giving the times and places of the clinics can be heard. This number has also so far suffered from lack of publicity since the machine was installed just too late for the appropriate entries in the telephone directories and in the Yellow Pages in 1973. Despite the limited publicity which has been possible in public health clinics, in some educational establishments and in local authority publications the machine delivered its message 7,865 times between June and December, 1973. Plans to publicize the number more widely are in hand.

Incidence of Sexually Transmissible Disease

Table A. details the number of new registrations and the total attendances at the clinics in Manchester during 1973. The figures refer to infections or other conditions and not to actual numbers of patients. Individuals may have more than one condition simultaneously or may acquire multiple-reinfections within the year under review. An accurate estimate of the incidence of infection in the population is impossible and only trends can be indicated.

For comparison the figures for 1972 are included in brackets. Total new registrations for males have increased marginally to 7,107 whilst total new registrations for females increased by 265 (8 per cent) to 3,521. The overall total of 10,628 registrations represents an increase of 321 (3 per cent) over that of 1972, much less than that of the preceding few years.

Acquired Syphilis

There was a substantial decrease in early infectious syphilis in 1973. Table B. details the number of patients treated for early syphilis in clinics during the past decade. In 1973 a total of 32 patients (26 males and 6 females) were treated. The males comprised two seamen infected abroad and 8 admitted homosexuals, all except one infected locally. Infection took place locally in all but 5 of the 16 other males with early syphilis. All of the 6 females treated for early syphilis in 1973 were infected locally.

The number of patients treated for late non-infectious syphilis during the year was 30 (24 males and 6 females).

Congenital Syphilis

No infants with congenital syphilis were seen during the year.

Late congenital syphilis was diagnosed in 8 patients (2 males and 6 females) all over the age of 15 years.

Gonorrhoea

Table C. shows the number of infections with gonorrhoea treated in males in the clinics in Manchester during the year. In 1973 the number of infections in males decreased by 218 (12 per cent) to a total of 1,614.

The number of infections in females decreased marginally by 4 to 963. Three cases of accidental infection in children were seen in the clinics during the year.

The decrease in gonorrhoeal infection which started in 1972 has been maintained. The number of infected females has remained static whilst there has been a satisfying reduction in the number of infections in males. The male: female ratio is now 1·6:1. This is encouraging and suggests that after a number of years when the disease was seemingly getting out of hand, some measure of control has been regained.

Venereal Disease in Young People

One boy aged 19 years was treated for early syphilis in 1973.

Table D. shows the number of gonococcal infections occurring in the different age groups during the past five years. The number of young boys under the age of 20 years treated for gonococcal infections during the year was 203 which represented 12 per cent of the total in males. The actual number of infections treated was 25 (12 per cent) fewer than in 1972 and followed the pattern of the overall decrease in males during the year.

The number of infections in females under the age of 20 years was 310, a decrease of 11 (3 per cent) in 1973. This also follows the pattern of the small overall decrease of infection in females during the year.

For the second year in succession the relentless increase of venereal disease in young people appears at least to have been contained.

Other Conditions

Other conditions cover a wide variety of genital infections and other ailments sometimes but by no means always associated with promiscuous sexual behaviour. These maladies, some now termed sexually transmissible diseases, may be multiple and may be associated with statutory venereal disease. The commonest of these conditions is non-gonococcal urethritis in males and in 1973 this diagnosis was made in 1,996 cases, also a marginal decrease of 31 compared with 1972.

The number of patients who attended for reassurance only in 1973 was 1,846 males and 1,010 females representing 28 per cent of all registrations in both sexes. This compares with 1,579 males (22 per cent) and 708 females (21 per cent) in 1972 and the steady increase in the number of such patients continues.

Including those requiring reassurance only, the total of other conditions in males and females in 1973 was 7,981, an increase of 594 (8 per cent) over 1972. Patients with these conditions now account for 77 per cent of the total new registrations in the clinics.

Venereal Disease Contact Tracer

One health visitor is seconded full-time to the venereal disease service by Manchester Corporation for contact tracing. Because of staff changes the health visitor was only effectively in post during 1973 for five months. During this time 77 contacts who would not otherwise have attended were persuaded to attend the clinics. By personal contact 121 patients who had defaulted from the clinics whilst not adequately treated were also persuaded to attend. A total of 394 home visits was made.

Obviously in the area covered by the clinics in Manchester, one contact tracer is inadequate. During the year authority has been obtained to recruit one further full-time and one part-time health visitor for contact tracing. So far because of staff shortages these posts are unfilled and until they are, contact tracing in the area cannot be really effective.

TABLE A.

1973. Summary of new registrations and attendances, Manchester clinics (1972 totals in brackets)

	Males	*Females*	*Total*
Early Syphilis	26 (42)	6 (10)	32 (52)
Late Syphilis	24 (36)	6 (19)	30 (55)
Congentital Syphilis ..	2 (3)	6 (11)	8 (14)
Gonorrhoea	1614 (1832)	963 (967)	2577 (2799)
Other Conditions.. ..	5441 (5138)	2540 (2249)	7981 (7387)
Total new registrations ..	7107 (7051)	3521 (3256)	10628 (10307)
Total attendances ..	21065 (19523)	8674 (8715)	29739 (28238)

TABLE B.

Early acquired syphilis. Manchester clinics

Year	*Males*	*Females*	*Total*
1964	13	3	16
1965	31	16	47
1966	9	5	14
1967	30	5	35
1968	40	9	49
1969	31	4	35
1970	17	6	23
1971	21	5	26
1972	42	10	52
1973	26	6	32

TABLE C.

Gonorrhoea. Manchester clinics

Year	*Males*	*Females*	*Total*
1964	1899	573	2472
1965	1547	464	2011
1966	1781	573	2354
1967	1830	673	2503
1968	1752	706	2458
1969	1741	779	2520
1970	1754	747	2501
1971	1994	912	2906
1972	1832	967	2799
1973	1614*	963*	2577

*Includes 1 male and 2 female infants with accidental infection.

TABLE D.

Age groups of male and female patients treated for gonorrhoea.*
Manchester clinics

	1969		1970		1971		1972		1973	
Age (*years*)	M	F	M	F	M	F	M	F	M	F
Under 16	4	6	2	8	5	16	5	15	4	12
16 and 17	31	73	40	91	66	120	53	123	45	97
18 and 19	146	175	150	150	157	184	170	183	154	201
Total under 20	181	254	192	249	228	320	228	321	203	310
per cent under 20	10	32	11	33	11	35	12	33	12	32
20 to 24	506	271	527	262	567	297	581	355	504	350
25 plus	1054	254	1035	236	1199	295	1023	291	906	301
Totals	1741	779	1754	747	1994	912	1832	967	1613	961

*Accidental gonococcal infection in children excluded.

Occupational Health

Since the appointment in June, 1971, of a Deputy Principal Medical Officer to take charge of the occupational health service, a limited expansion of this service to Corporation employees has occurred. However, any further expansion of the service will necessitate both an increase in the present staffing complement and also additional accommodation.

Pre-employment medical review

The SELNEC transport authority provides its own occupational health service and referrals to the Medical Officer of Health are made only for the purposes of retirement on medical grounds. The majority of the personnel of the Manchester and Salford Police Force receive medical surveillance from specially appointed doctors, as do the operational staff of the Fire Brigade.

For selected groups of employees of the Health Department, the Social Services Department and the Education Department, medical examination and/or chest X-ray is required before employment and subsequently chest X-rays are repeated at two yearly intervals.

Selected groups of employees of the Waterworks Department and of the Markets Department have a medical examination and/or bacteriological examination before employment, followed by repeat investigation at yearly or three-yearly intervals.

As a minimum requirement, all prospective non-manual employees must complete a medical questionnaire, but for the majority of prospective manual employees there is no medical surveillance prior to employment in the Corporation service. The screening of these medical questionnaires is carried out by a senior medical officer of the Health Department. In cases where there is no special departmental need for a medical examination or other investigation, further medical investigations are required in only a minor proportion of instances. There were 2,998 questionnaires checked in 1973 and it was necessary for medical examination and/or chest X-rays to be carried out in 1,275 of these cases. Only 16 applicants were considered to be medically unfit for employment.

Long term sickness absence

The Medical Officer of Health, at the request of employing committees and heads of departments and with the permission of the employees concerned, obtained confidential medical reports on employees absent from duty due to sickness for prolonged periods of time, or when their entitlement to sickness benefit was about to expire. Subsequently seven employees were referred for medical examination by an independent consultant and 33 were found alternative light work.

Retirement for medical reasons

The Medical Officer of Health recommended the retirement, for medical reasons of 240 employees of the Corporation who were incapable of carrying out their duties and for whom no suitable alternative work was available. The following table shows the number of employees retired for each main type of incapacity:—

Nature of incapacity	Number of cases
Malignant neoplasms	7
Ischaemic heart disease	59
Cerebro-vascular disease	7
Hypertension	11
Other diseases of the circulatory system	10
Bronchitis	43
Other respiratory disease	14
Genito-urinary disease	–
Disease of nervous system	8
Arthritis	19
Other diseases of bones and joints	18
Diabetes	3
Diseases of digestive system	5
Neurosis and psychosis	27
Injuries	1
Other causes	8
	240

Town Hall Clinic

The staff welfare, first-aid and immunization clinic, situated in the Town Hall extension basement, again operated most satisfactorily and was used regularly for medical consultations. Chiropody sessions were provided for patients who find a centrally located clinic more convenient. Details of the routine work carried out in this clinic include:—

Reason for attendance		Number
Treatment of injury and illness	first attendance	2,247
	total attendances	2,600
Home visits to Corporation employees on sick leave		42
Medical examinations		1,501
Immunizations	Yellow Fever	2,659
	Cholera, T.A.B. and Typhoid	1,432
	Smallpox	894
	Tetanus	118
Chiropody		471

One of the Manchester Regional Hospital Board Mass Radiography Units continued to be located in the clinic one day per week, with the sessions extended into the early evening to give general practitioners' patients more opportunity to attend.

Analysis of medical reviews

The following table relates to the number and type of medical reviews conducted for pre-employment and general purposes and the number of retirements due to medical incapacity:—

Department	Pre-employment medical questionnaires examined	Pre-employment medical examinations and/or X-rays	Retirements due to incapacity	Miscellaneous medical reviews	Bacteriological investigations
Airport	81	61	8	25	—
Art Galleries	13	5	—	1	—
Baths and Laundries	1	—	—	3	—
City Architect's ..	34	3	—	3	—
City Engineer and Surveyor's	336	94	18	47	—
City Estates and Valuation	32	—	—	—	—
City Planning	46	3	1	1	—
City Treasurer's	91	11	6	6	—
Cleansing	6	2	12	80	—
Direct Works	116	33	24	89	—
Education	—		31	2	—
Fire Brigade	5	2	2	3	—
Health	255	203	4	35	17
Housing	61	14	3	12	—
Libraries	104	15	2	7	—
Lord Mayor's	—	—	—	—	—
Magistrates	32	3	—	—	—
Markets	5	1	1	10	132
Parks	14	6	7	13	—
Police	134	18	6	21	—
Probation	21	8	—	—	—
Rivers	122	25	3	7	—
Selnec	—	—	92	—	—
Social Services	1,297	739	10	81	—
Stationery	8	1	—	—	—
Town Clerk's	119	14	1	5	—
Town Hall Superintendent's	3	—	—	—	—
Waterworks	60	14	9	24	211
Weights and Measures	—	—	—	—	—
Totals	2,998	1,275	240	472	360
For other local authorities ..	—	—	—	37	—
Grand totals	2,998	1,275	240	509	360

Other Medical Reviews

Medical review of hackney carriage drivers

It is necessary for applicants to the Licensing and Fire Brigade Committee for hackney carriage licences to submit medical reports completed by their family doctors. In these reports, special attention is directed to the presence of eye and ear defects, heart disease and diseases of the nervous system. New applicants numbered 383 whilst 131 renewal applications were submitted.

Exemption from parking meter charges for disabled persons

Disabled persons using invalid carriages or motor vehicles and who need to park such vehicles in the city centre, can be provided with badges exempting them from parking meter charges. The Medical Officer of Health considers applications for such exemption and 160 new applications were approved.

Epilepsy and driving

The Motor Vehicles (Driving Licences) Regulations, 1970 enables persons suffering from epilepsy who could satisfy certain specified medical requirements, to be granted a driving licence.

Twenty new applicants and 37 renewal applications were submitted. In two cases it was found necessary to reject the application.

Examination of Waterworks Department staff

In accordance with Government recommendations contained in the circular "Safeguards to be adopted in the Operation and Management of Waterworks" which suggests tri-annual bacteriological screening of Waterworks employees who are engaged upon employment where a risk to the purity of the water supply is likely to arise, 211 employees of the Corporation's Waterworks Undertaking had a Widal test carried out on a sample of their blood and samples of their faeces and urine were examined at the Public Health Laboratory for Salmonella and Shigella organisms. Forty-eight employees were found to have raised blood levels which necessitated further bacteriological examination in order to eliminate the possibility of an enteric fever carrier state. By the end of the year 25 of these employees had completed satisfactorily these further tests, leaving 19 persons whose tests were continuing and four employees who had left the service of the Corporation. In no instances were dysentery or typhoid organisms isolated.

Included in the 48 employees, who were required to undergo further bacteriological examination, were three persons from whom Salmonella organisms were isolated. They were immediately excluded from employment where a risk to the purity of the water supply would be likely to arise, and further bacteriological tests were continuing on one of these persons at the end of the year, whilst another employee had satisfactorily completed his screening. Two persons left the service of the Corporation and did not complete the tests.

During 1973, Waterworks Department employees, who were notified as absent from employment suffering from gastric or intestinal disorders, underwent additional laboratory examination of their faeces when they resumed employment in order to eliminate the possibility of an enteric carrier state. A Salmonella organism was isolated in one case; the remainder satisfactorily completed the additional tests.

Since the latter half of 1958, over 2,000 series of bacteriological investigations have been performed on Waterworks Department staff, and although 13 employees were found to be excreting a Salmonella type organism, in no instances were typhoid, paratyphoid or dysentery organisms isolated.

Examination of Abattoir staff

Under the legislation requiring medical and bacteriological examination of Abattoir staff engaged in the handling of meat for export to the European Economic Community, selected Health and Market Department's staff together with the appropriate staff of the Meat and Livestock Commission and staff of firms of market traders were medically and bacteriologically examined.

There were 132 medical examinations performed and in association with these examinations over 200 faeces samples were submitted for testing at the Public Health Laboratory; 87 employees satisfactorily completed their examinations and were issued with certificates to that effect, leaving 45 persons whose tests were continuing at the end of the year. In no instances were Salmonella or dysentery organisms isolated.

Arrangements were made with the Manchester Regional Hospital Board for a Miniature Mass Radiography Unit to visit the City's Abattoir in June, 1973. There were 160 employees X-rayed, and the results were satisfactory in all cases.

Since 1968, over 700 bacteriological and medical examinations have been performed on Abattoir personnel, all with satisfactory results.

Cremation Certificates

The Medical Officer of Health is medical referee to the Blackley Crematorium and Doctors A. E. Jones and A. Butterworth are appointed deputy medical referees. There were 1,439 certificates examined during 1973. On no occasion was it necessary for the medical referees to withhold authorisation for cremation.

Health Control at Manchester Airport

The Medical Officer of Health is responsible for health control at the airport and also for medical inspection of aliens and Commonwealth citizens arriving at the airport.

Health control includes clearance of aircraft and passengers arriving from infected areas. As far as the United Kingdom is concerned, all passengers arriving from smallpox infected areas should have a valid smallpox vaccination certificate and all passengers arriving from cholera infected areas are now given a cholera warning leaflet in line with a recommendation from the Department of Health and Social Security. In the absence of valid smallpox certificate, passengers are offered vaccination at the airport. Arrangements were made to ensure medical surveillance of these vaccinated passengers and also passengers who refuse vaccination or who are excused vaccination on account of medical contra-indications.

Medical clearance of passengers on scheduled flights from smallpox and cholera infected areas, or from areas where certain other diseases have been notified, causes little difficulty, as customs officials at the airport always give the Health Department adequate advance notice. Difficulties arise when unscheduled aircraft are diverted to Manchester from other airports on account of fog or other adverse local conditions. Notice of arrival in such circumstances is often not more than 10 to 15 minutes.

Health control duties are carried out by local health authority medical and lay administrative staff, in addition to their other duties.

The number of aircraft cleared during 1973 was 122 compared with 146 in 1972.

In July 1973, Tunisia and Italy were declared cholera infected areas and between 26th July, 1973 and 31st December, 1973, 77 aircraft arriving from both Tunisia and Italy received health clearance. Health warning notices were given to all passengers.

On one occasion during the year, a child passenger with an atypical skin rash arrived at the airport. The child and his mother were detained until seen by a consultant who is also a regional smallpox consultant; smallpox was ruled out, but the child who was in a very poor nutritional state was admitted to Monsall hospital for further investigation and treatment of the rash. Often the nutritional state of young child immigrants causes concern, and arrangements have been made for affected children to be admitted for observation and treatment to Monsall hospital, with the approval of the parents. During the year five children were admitted directly from the airport.

On fifteen other occasions a medical officer attended at the request of either the Police or Immigration authorities. Twelve of these requests were in connection with sickness of passengers. The remaining three visits were requests to remove persons to mental hospitals.

There were 1,055 Commonwealth citizens and 8 aliens medically examined under the Immigration Act, 1971 compared with 1,683 Commonwealth citizens and 12 aliens in 1972.

Immigrants and Aliens referred for Medical Examination

Year	West Indian	Pakistani	Other	Total
1970	508	28	102	638
1971	327	589	145	1,061
1972	247	1,175	273	1,695
1973	3	1,027	33	1,063

No Commonwealth citizen was refused admission for medical reasons, but two aliens were refused admission on medical grounds by the immigration officer. One of these was a young man who arrived on a flight from New York. It proved impossible to arrange hospital admission and the passenger was detained at a local police station overnight and at the request of British Airways, provided with a medical escort back to New York. The health authorities at Kennedy Airport were contacted by the medical officer on arrival, but in spite of the medical diagnosis and previous history it was stated that there were no facilities to offer either treatment or supervision. Twelve Commonwealth citizens were admitted conditionally.

Radioactivity

Radioactive Substances Act 1960

By the end of 1973, 43 certificates of registration under section 1 and 9 certificates of authorisation under sections 6 and 7 together with 10 under section 3 had been issued to firms and establishments in the City by the Department of the Environment. Section 1 registration refers to the keeping and use of radioactive material, section 3 registration refers to the keeping and use of mobile radioactive apparatus while sections 6 and 7 refer to the disposal and accumulation of radioactive waste.

Nuclear Installations Act 1965

No applications for nuclear site licences, applicable in respect of industrial sites within the City, were received.

Arrangements for dealing with incidents

These national arrangements were scheduled in Ministry of Health Circular 3/64 and H.M. (65) 82. The Manchester Royal Infirmary is the designated hospital in this region prepared to accept radiation casualties. Liaison between this hospital, the University of Manchester Radiological Protection Service, the Christie Hospital, Manchester, and the Health Department was established some years ago and has been maintained.

Teaching establishments

The University of Manchester Radiological Protection Service has provided the following review of radiological work at Manchester Schools and Colleges in 1973.

"Routine annual visits were made to all the schools and colleges of Education in February 1973, in order to check on the use and storage of radioactive sources. Nearly every school and college in the region now uses sealed sources in Physics Department work, but the development of unsealed radio-tracer work in chemistry and biology is not occurring as fast as had been anticipated. No source was found to be missing and generally they are now all stored in deed boxes which are screwed internally to a bench in one of the Science Departments' store rooms. This procedure provides adequate security and an acceptable degree of fire protection.

A number of establishments took advantage of the visit to ask for monitoring equipment to be repaired, and this was done without charge where the total cost of labour and materials did not exceed £5.00.

A new directive from the Department of Education and Science detailing the radiation protection requirements for schools is to be published during the late summer of 1973. This will replace the former document, reference AM 1/65 and will again provide the Code of Practice for schools use, which is required in order that they shall have exemption from the requirements of the Radioactive Substances Act 1960.

A special enquiry was made during this year's routine visits about the use of lasers, and it was found that five schools had purchased continuous wave helium neon lasers. The equipments were used for demonstration purposes only and it is proposed that a guide line be prepared for distribution during next year's visit, which will supplement the Department of Education and Science administrative memorandum on Lasers for Schools, published in October 1972.

A further course on Radio-Isotopes in Schools Biology is being organised for school teachers in July 1973."

Acknowledgement

The Director of the Radiological Protection Section at Christie Hospital and the University of Manchester Radiological Protection Officer have been most willing at all times to give professional advice and assistance. This co-operation and liaison is sincerely appreciated.

Health Education

The primary task of the health visitor is health education and the prevention of disease. In 1948, the year in which the National Health Service was introduced, the proposals concerning health education in the city, which were approved by the Minister of Health were stated by the then Medical Officer of Health to be through the following media:

(a) fieldworkers—health visitors and sanitary inspectors

(b) publicity—films, press, lectures, publications, radio and exhibition

(c) co-operation with organisations having the same objectives.

This is still true today. Health visitors co-operate with the public health inspectors in the control of infectious diseases, particularly in regard to cases of gastro-enteritis. There can be no doubt that the individual advice given to families has contributed to the general improvement in health which has been achieved. The infant mortality rate of the city has been reduced from 42·12 in 1948 to 22·15 in 1973. This figure remains above the national average but the difference between the comparative figures has been reduced by half.

Much remains to be done. The health visitor is the only member of the health department staff to visit families of all social classes to advise on health matters whether or not a health problem has been identified and it is in carrying out this duty that she is able to create opportunities for health education. Unfortunately many mothers are still reluctant to have their children vaccinated or immunised and efforts have been made during the year to follow up defaulters, particularly those who had commenced a course of injections but failed to complete for one reason or another. A nursing officer health visitor was appointed during the year with the special task of co-ordinating formal health education undertaken by the community nurses. Requests for health education materials, films etc., are made to her and she has arranged for groups of staff to view new films and discuss their relative value. There are increasing requests for health visitors to undertake health education in schools and it is essential that they are given every help with syllabus and teaching aids.

The health educator today must be thoroughly conversant with her subject and her presentation of it must be of the highest standard if she is to compete successfully against the mass publicity given to matters deleterious to health—smoking being the obvious example.

The health education programme in primary and secondary schools continued as in previous years.

Every endeavour was made to run these courses within the academic programme laid down, and there was no doubt that the value of the talks was appreciated by the teaching staff. The children who attended these talks were interested and were encouraged to discuss and ask questions on the subject if they wished to do so.

In addition to the basic programme on mothercraft, general and personal hygiene, talks were given on the dangers of drugs, smoking, personal relationships and venereal diseases.

The Manchester Regional Committee on Cancer continued to be very active in the field of health education and the Executive Officer of the Educational Project of this Committee has supplied the following report:—

The long association between the Corporation of Manchester and the Manchester Regional Committee on Cancer began fifty years ago. It was on the initiative of Dr. R. Veitch Clark, then Manchester's Medical Officer of Health, that the Manchester Committee on Cancer was first established in 1924. As Chairman of the Committee until his retirement, Dr. Veitch Clark drew together eminent doctors, scientists, and representatives of public and professional life in the City. Sir John Stopford, Sir William Mansfield Cooper, Dr. E. M. Brockbank, Professor Ralston Paterson—all these and many more eminent personalities have served on the Committee, and successive Lord Mayors have consented to become President. Under Dr. Veitch Clark's Chairmanship, the Committee, through its research scientist Dr. Twort, discovered the cause of spinners' cancer in the cotton industry. The preventive measures made possible by this discovery were hailed as the first of their kind anywhere in the world.

Dr. C. Metcalfe Brown succeeded Dr. Clark as Medical Officer of Health and also as Chairman of the Manchester Committee on Cancer. He guided the Committee during many years of its pioneering venture in education of the public about cancer, with the assistance of his administrative officer, the late Mr. C. Wilkinson, and of the present Honorary Secretary, Mr. D. Gregory who succeeded him. Since Dr. Metcalfe Brown's retirement, Dr. Kennedy Campbell has served as a valued and respected member of the Committee. The Committee's programme of public education, now covering the whole of Cheshire and Lancashire with the exception of Merseyside, has served as a model scheme for similar ventures elsewhere in Britain and also in many countries abroad. None of this would have been possible without Manchester's pioneering initiative in the first place, and its generous financial support, along with other local authorities in the region, throughout the years.

During the past year, the Committee continued to offer its free service of advice and information to the public in general and to voluntary groups and societies. One hundred and nineteen groups in the City heard talks by the Committee's speakers; many individuals heard broadcasts over Radio Manchester, and saw the Granada broadcasts to schools arranged in collaboration with the Committee, and the BBC TV broadcast of Pebble Mill at One which featured the Committee's award-winning film "Make Sure". The Committee was glad to co-operate with the Medical Officer of Health and his staff in promoting the cervical smear test in the prevention of cervical cancer. It also took part in in-service lectures to the City's public health nurses, at all of which nurses were given free copies of the booklet "Helping to Cure Cancer".

There are encouraging signs that the miasma of unrelated gloom and despondency about cancer in many people's minds is at last beginning to lift, and that patients with some forms of the disease are consequently more ready to seek medical advice at an early, and therefore curable stage. It has often been said that successful education, which would bring a majority of people with potentially-curable cancer under medical care sooner, could bring an improvement in the cure of cancer far more significant than is likely to come from any foreseeable discoveries in the research laboratories. The Committee intends to continue its efforts in the Region until deaths from cancer, which could have been avoided by preventing the disease or by seeing the doctor in good time, no longer take their unacceptable and needless toll of life.

Ambulance and Transport Service

There was a slight increase in the number of patients carried, 667 more patients being conveyed by the ambulance service and 70 more patients being conveyed by the hospital car service than in the previous year.

Fifty-four two-stretcher ambulances and twenty-two one-stretcher dual-purpose vehicles were in service at the end of the year.

Operational record

Ambulance service	**1973**		1972	
	Stretcher cases	*Sitting cases*	*Stretcher cases*	*Sitting cases*
Patients carried—				
accidents	25,596	—	26,929	—
general	16,386	290,760	17,273	287,889
others	1,328	135	1,203	244
	43,310	290,895	45,405	288,133
	334,205		333,538	

	1973	1972
Total mileage—		
two-stretcher ambulances	818,802	821,481
dual-purpose vehicles	340,502	353,792
pool cars	70	346
	1,159,374	1,175,619

Hospital car service	1973	1972
Patients carried	8,668	8,598
Mileage	83,311	89,773

Train journeys

In appropriate cases the transport of patients by rail continued to be arranged, with 481 cases carried, a decrease of 353 on the previous year.

Flying squad

The provision of ambulance transport for the emergency maternity flying squad and its equipment provided by St. Mary's Hospital continued. The flying squad was conveyed by ambulance on 20 occasions and in 17 cases the patient subsequently was transferred to hospital in the same vehicle.

Staff

The approved revised establishment of operational staff at the end of the year was 160 and included 123 ambulancemen who have qualified for the Proficiency Certificate issued by the Ambulance Service Advisory Committee.

In-service training for new recruits continued and some members of the staff were seconded to the six-week qualifying courses and to two-week refresher courses held at the Lancashire Ambulance Service Training School.

A team was entered in the National Ambulance Competition organized by the National Association of Ambulance Officers and, in the Regional competition attained third place in the team test and first place in the driving test. In the final the driver attained ninth place in the driving test.

All drivers employed in the Health Department on the 1st January of each year are entered for the National Safe-Driving award organized by the Royal Society for the Prevention of Accidents. One hundred and twelve qualified for awards for 1972, including 104 ambulance drivers and the presentation of the awards was made by the Lord Mayor—Alderman K. Collis—at a function held in the Town Hall.

Hospital car service

Hospital car service volunteers recruited by the Women's Royal Voluntary Services continued to augment the ambulance service, particularly in the transport of walking cases to and from out-patient clinics and convalescent homes.

Municipal car pool

One limousine car and seven saloon cars were operated as a municipal car pool, being used by various committee members and officials and also to convey mental and other patients to hospital; these latter journeys are included in the ambulance service statistics. The operating mileage of 103,653 miles was 8,453 miles less than in 1972.

Commercial vehicles

Four vans operating full-time for the Health Department travelled 34,512 miles, of which 12,793 miles were incurred on disinfection service duties.

Disinfection and disinfestation service

A disinfection and disinfestation station is an integral part of the Monsall sub-depot, two steam disinfectors being available for clothing and bedding. In addition, a formalin chamber is used for articles which cannot be subjected to steam pressure. One of the commercial vehicles serves as a bedding van for the collection of infected bedding and clothing and is designed to facilitate rapid disinfection of its interior.

Immunization unit

The mobile immunization unit continued to be used for children whose parents were unable to use the service provided at child welfare centres. The operating mileage was 6,815 miles, compared with 9,048 miles in 1972.

Operating mileage

The total mileage operated by all sections of the ambulance and transport service in 1973 was 1,304,284.

Nursing Homes and Agencies

The nursing homes in the city which have been exempt from registration under section 192 of the Public Health Act, 1936, have, since 15th May, 1964 been required to be registered with the appropriate local authority in accordance with The Conduct of Nursing Homes Regulations, 1963. No nursing homes were discontinued during 1973, and details of the six nursing homes registered are as follows:—

Names, addresses, principal officers	*Purpose of registration*
Manchester and Salford Methodist Mission, Lorna Lodge Maternity Home, 133 Barlow Moor Road, West Didsbury, Manchester, 20. (061-445 5219) (Matron—Miss C. Gott, S.R.N., S.C.M.)	5 maternity patients
The Manchester District School for Jewish Handicapped Children, Laski House, Smedley Lane, Cheetham, Manchester 8. (061-205 1920) (Matron—Mrs. M. Rennie, R.F.N.)	15 mentally handicapped children
St. Joseph's Hospital, Carlton Road, Whalley Range, Manchester 16. (061-226 2231) (Matron—Sister Angela, S.R.N., S.C.M., H.M.C.)	140 medical and surgical patients
Stonecroft Recovery Home, Parkfield Road, Didsbury, Manchester 20. (061-445 2972) (Matron—Mrs. A. G. Kirk, S.R.N.)	12 convalescent patients
Philip Godlee Lodge, 842 Wilmslow Road, Didsbury, Manchester 20. (061-445 3183) (Matron—Mrs. A. H. Kerney, S.R.N.)	46 elderly and infirm convalescent patients
The Alexian Brothers' Nursing Home, 171 St. Mary's Road, Moston, Manchester 10. (061-681 1929) (Brother Superior Anthony, S.R.N.)	84 medical patients

Inspections of the homes by a senior medical officer and a public health inspector have been carried out and advice has been available whenever required.

In the course of the year there has been considerable change in that two of the four licensed agencies closed down, and a third removed out of Manchester into Cheshire. Two applications for a nursing agency licence and one for the renewal of a licence, as required by section 2 of the Nurses Agencies Act, 1957, were approved. They are:—

Nurses Night and Day Limited, The Nursing Centre, 14 Piccadilly, Manchester, M1 3AW.
City Nurse, 284 Fog Lane, Burnage, Manchester, 19.

and

Trumps Agency, 59 Deansgate, Manchester, 3.

Residential Homes

Dr. Garrett Memorial Home

The Dr. Garrett Memorial Home, Conway, is situated overlooking the sea and the estuary of the River Conway and is an ideal setting for a children's convalescent home.

The accommodation for 101 children consists of three large detached houses and a number of prefabricated buildings in the grounds. The outdoor play facilities include an adventure play ground, which is very popular with children of all age groups.

An outbreak of chickenpox during January/February, and June/July made it necessary to restrict admissions for a period of three weeks in each instance to children who had already suffered from the complaint, in an effort to control the infection. This had the desired effect.

Admissions during the year averaged 22·5 children weekly. Children were referred for convalescence by the School Health Service, Family Health Service and general practitioners.

Interest has been maintained with outside voluntary organisations. The "Friends of Dr. Garrett's" association organised a sherry evening in August, and a buffet dance in November. Proceeds of these functions have gone to provide films, birthday presents, and pocket money for the children in residence.

A fireworks display and Christmas party were organised by the Ladies Circle and the Round Table of Conway.

Many gifts of toys and sweets for Christmas were donated by local churches, organisations and the Manchester branch of the Variety Club of Great Britain.

The programme of in-service training continued in 1973, and five members of the staff obtained the Certificate of Attendance for the course in child care. The course was organised at the College of Further Education, Bangor. Three senior children's attendants obtained the Certificate of Qualification in residential social work, this course was a 'day release course' held at the College of Further Education, Crewe.

Throughout the year picnics, visits to Chester Zoo, swimming baths, ancient monuments and National trust properties have been among the activities enjoyed by the children during their stay.

While in residence, the health of the children is supervised by Dr. Tudor Owen, the visiting medical practitioner who pays regular visits to the home, and is always on hand for emergencies if requested by the Matron or her three nursing staff, at least one of whom is always on duty.

The Lord Mayor and Lady Mayoress of Manchester together with the Mayor of Conway, visited the Home on the 19th July. During their visit the "Outspan" organisation called to entertain the children.

On the 30th August, the Chairman of the Residential Homes Sub-Committee, Councillor Conquest, and the Deputy Chairman of the Education Committee, Councillor Mrs. Sally Shaw visited the Home.

In October a memorial service was held at the St. Mary's Parish Church, Conway, to mark the 50th Anniversary of the Dr. Garrett Memorial Home. During the service the Chairman of the Residential Homes Sub-Committee, Councillor G. Conquest gave an address in appreciation of the work of Dr. & Mrs. Garrett, and referred to the generosity of Mrs. Garrett's donation of the Home on her death. The service was attended by members of the Residential Homes Sub-Committee, the Mayor and Mayoress of Conway, and many local people. Afternoon tea was provided at the Home following the service. Many past patients and retired members of the Staff who had been resident or employed at the Home during Dr. and Mrs. Garrett's days were among the guests.

The Residential Homes Sub-Committee considered the question of the admission of children to the Home over the Christmas period and it was decided that the Home be closed for a period of two weeks covering Christmas and New Year holidays. This suggestion was made primarily for the benefit of the children. Additional benefits were that the Home was given a thorough spring-clean, and allowed the staff to take the additional weeks holiday which had been granted in 1973.

Routine visits were made every three months by the Residential Homes Sub-Committee and monthly by the Health Department medical and administrative staff.

Nursing care required

Illness	Cases	
	1973	1972
Chicken pox	29	27
Scarlatina	2	13
Mumps	—	12
Measles	3	6
Rubella	8	2
Asthma-coryza	1	10
Croup	—	1
Ulcerated mouth	—	2
Tonsillitis	7	18
Athletes foot	—	1
Injury to face	1	1
Injury to knee	1	—
Influenza	—	14
Diarrhoea	—	7
Diarrhoea and vomiting	1	—
Infected spots	—	1
Rash—unknown origin	1	—
Urinary infection	—	1
Abdominal pain	2	1
Colitis	—	1
Upper respiratory tract infection	8	20
Otitis media	1	1
Acute phimosis	—	1
Enlarged glands	2	1
Bronchitis	—	1
Pyrexia—unknown origin	2	1
Observation appendicitis	—	1
Pneumonia	1	—
Severe epistaxis	1	—
Laceration of the mouth	1	—
All types	72	144

Resulting from throat swabbing on arrival for their period of convalescence, 7 children were found to be symptomless carriers of Group 'A' Haemolytic Streptococci and were isolated during their period of treatment.

Two children were admitted to Llandudno Hospital, one with a suspected appendicitis, and one with a fractured head of radius.

Three children were taken to the casualty department, one with a knee injury, one with a fractured nose, and one with repeated dislocation of the shoulder.

Admissions

Type of cases	**1973** Number of cases	1972 Number of cases
Admissions	1,075	1,155
Re-admitted from hospital	2	1
Totals	1,077	1,156

Discharges

Type of cases	**1973** Number of cases	1972 Number of cases
"fit"	1,106	1,073
"improved"	56	72
"to hospital"	2	2
Totals	1,164	1,147

Municipal Hostels

Women: Ashton House, Corporation Street, Ancoats,
Manchester, M4 4DG.

Men: Walton House, Harrison Street, Ancoats,
Manchester, M4 7PF.

The municipal hostels were established over 70 years ago to provide accommodation for working men and women at reasonable cost. Residents must be able and willing to cater for themselves. The facilities include the use of day rooms, a residents' kitchen for the preparation of food, a dining room with individual food lockers, a laundry room, toilet facilities and night accommodation in small individual cubicles. In both hostels there is a shop where residents may buy a variety of food, groceries and other goods. Most of the commodities for sale can be bought in small quantities just sufficient for one meal. A cooked mid-day meal may be bought at Ashton House at low cost and at both hostels residents may purchase hot and cold snacks.

The inclusive charge is 48p per night (£2·86 per week) at Ashton House, or 52p per night (£3·12 per week) at Walton House. Residents are encouraged to book weekly, weekly bookings being accepted on any day of the week. The average number of beds occupied nightly was 95 at Ashton House and 295 at Walton House.

It is the responsibility of the respective managers and assistant managers to screen new residents to assess suitability for short term residence. It is very important to encourage residents to obtain their own permanent accommodation, otherwise there is a tendancy for residents becoming institutionalised, and the hostels turned into vast old people's homes, which lack the appropriate facilities and staffing.

At the end of the year an average of 58 per cent of women at Ashton House and 40 per cent of men in Walton House were gainfully employed.

In both hostels, however, there is still a hard core of elderly, chronic sick and unemployed persons who have been in residence for up to 30 years but who are unable or unwilling to obtain residential accommodation where they would receive care and attention. Hostel accommodation can not be booked more than one week in advance, but the Health Department is loathe to turn away these long term residents and it is only by death that this number is reduced.

Ashton House is being replaced by a new purpose-built 115 bed hostel in the next few years.

The improvements to Walton House mentioned in last year's Annual Report were started during the year. The new heating system is nearly complete and the alterations to the cubicles and sanitary accommodation is approximately 50 per cent complete.

ENVIRONMENTAL HEALTH SERVICES

Introduction

Chief Public Health Inspector,

E. W. Foskett, B.Sc.(Econ.), D.P.A., M.A.P.H.I., M.R.S.H.

Although the annual report for 1972 recorded the completion of the representations in the major post war clearance programme there were further clearance areas dealt with in 1973. A total of 615 dwellings in six areas were represented and this shows a marked down turn in the rate of representations.

The completion of the representations was only one aspect of the acceleration of the clearance programme. By arrangement with the Department of the Environment there has been fixed a public inquiry programme which will enable all the areas represented up to December 1972 to be dealt with by March 1974. Because of this there were 47 public inquiries in 1973 dealing with 47 clearance areas. A total of 6,196 houses was involved and objections were received in respect of 2,235 of these. This constituted 36 per cent of the total and each objection necessitated a full re-inspection of the objector's houses. Two new factors were also encountered. Largely as a consequence of opposition organised by residents associations the department's work in re-inspection was hampered by refusal of occupiers to admit inspectors. This caused delays and protracted the proceedings and usually detracted from the objector's case. Because of the same sort of opposition some public inquiries took longer than the time scheduled for them with the result that the department's inspectors were detained in attendance at the inquiries and programmed work fell into arrears while the Secretary of State's inspectors also encountered difficulties in keeping to their work schedules.

This diversion of resources conflicted with the need to push ahead with the large influx of improvement grants. The department was unable to get to grips with the applications as quickly as would have been wished and servicing this activity became an important duty for most of the staff. Accordingly, the effort projected into dealing with slightly over 2,400 applications meant, inevitably that other aspects of the work suffered.

The aim of the improvement grant system is laudable, but currently there is little power to direct grants into the areas of housing where the need is greatest. The availability of improvement grants and the buoyant state of the house market undoubtedly contributed to the rise in building costs, thus making improvement more expensive. Nevertheless the grants available under the 1969 Housing Act made the conversion of larger houses with self-contained flats very attractive. The department dealt with many such schemes and experienced considerable pressures from developers both in respect of attempts to secure priority for schemes and for unsatisfactory schemes to be accepted. It is not generally appreciated that the Council has a duty to ensure that public money is only expended in respect of schemes designed to produce satisfactory and comfortable houses. The department also exercised a role of watchdog against unfair practices.

In accordance with the undertaking given the department diverted considerable manpower resources to the two pilot general improvement areas in the private sector. Some progress was made in securing an increase in the rate of uptake in improvement grants although this involved a very large number of man hours in negotiating with landlords and owner occupiers. Despite the slow progress with these areas there is evidence to suggest the areas have been somewhat more successful than the national average.

More encouraging was the progress made in an area in Moss Side where, in close co-operation, the department and the local residents association secured a high rate of grant application and completion of work. In October 1973 the Lord Mayor, a former chairman of the Health Committee, visited the area to see for himself the progress made.

In addition to this the department was heavily committed to advising residents' associations in the preparation of schemes of rehabilitation of dwellings already in declared clearance areas. In one instance, satisfactory schemes were produced and the Corporation offered no evidence at the Public Inquiry in those areas where the owners gave adequate undertakings to execute the required works. This is a procedure which may prove to be increasingly adopted.

The work relating to qualification certificates continued, but the nature of the work changed with emphasis being increasingly placed on grant aided improvements being carried out to comply with the condition of the Housing Finance Act, 1972.

The department's work in pollution control proceeded at a high level and is increasing rapidly as the public awareness of environmental disamenity rises.

Progress towards the completion of the smoke control programme continued despite the shortage of staff and at the end of the year the department was on target with the programme, but this was achieved only by the diversion of resources to the work. As a result of the progress made, the percentage of premises in the City subject to smoke control rose to 60 per cent and the area of land involved reached 77 per cent. The number of premises included in new smoke control orders submitted to the Committee was 11,638 in two Orders and three Orders came into operation.

At the end of the year the threatened, so called, "energy crisis" became a virtual reality. The effect of oil shortages will mean that the sulphur content of fuel oil will tend to rise, thus reversing the trends of recent years. This will mean an increase in sulphur dioxide pollution unless the total amount of oil fuel used is reduced as a consequence of shortage or of its more economical use. This again will be a change of trend for there has been a steady annual rise in oil consumption and, because of its relative cheapness and ease of use, there is the suspicion that economy in use has not always been a first consideration.

With the rising cost and increasing scarcity of fuel, home heating may suffer as occupiers, especially pensioners, will try to be economical in this direction, and in trying to "extend" fuels atmospheric pollution from domestic sources may be increased. Economy may also result in insufficient home heating and, while the inspectorate is watching the pollution situation, all inspectors have been alerted to be aware of domestic situations which will lead to hypothermia in young and old so that in appropriate cases medical and social workers can be alerted.

It seems probable that the days of cheap oil will never return and this will mean a short and medium term reversion to coal as an energy producer, even if this is through its utilisation to generate electricity. This will inevitably result in some increase in atmospheric pollution. The country's ability to expand the coal industry rapidly may depend on the exploitation of lower grade open-cast coal and the expansion of production from existing mines. Ample coal reserves exist and recent discoveries in Yorkshire, Staffordshire and Oxfordshire have assured satisfactory reserves of this fuel but the continued dependence on coal is likely to be unhelpful in reducing atmospheric pollution.

The department has also completed major pollution surveys for the guidance of the Corporation in local development situations and has started the survey of industrial establishments to identify all their pollution potential problems. This is a long term project.

During the summer, a coincidence of adverse weather conditions and plant failures led to complaints from residents in the east of the City from smells. Most of these emanated from plant registered with the Alkali Inspectorate and the matters were referred to the local office of the Alkali & Clean Air Inspectorate.

Noise investigations continue to rise in number and complexity and involve the inspectorate more and more in unsocial working hours. Work was done on road noise and one interesting problem was in hand at the year end. The system for determining the incidence of noise nuisance from road traffic using the L10 system depends on the concept of diminished road noise between midnight and 6 a.m. despite the known erosion of these limits in cities. The department is currently investigating a serious case where road traffic has inevitably increased in the early hours of the morning so that former criteria for nuisance are of no significance in this instance.

The modern food hygiene code post-dates the creation of the National Health Service and because hospitals are Crown property they have been legally beyond the control of the local authority within whose area they are situated. All of these establishments have considerable catering activities providing for patients and staff and these form a particularly vulnerable section of the population.

Relationships between local authorities and hospital authorities in respect of food hygiene have been very mixed. In some cases public health inspectors have been rigorously excluded from hospital catering organisations while in other cases their advice has been sought. In one large Manchester Hospital the department was always welcome and a senior public health inspector has for a number of years been a member of that hospital's food hygiene advisory panel.

A memorandum from the Department of Health and Social Security dated April 6th, 1973 recommended that local authorities be invited by Hospital Management Committees to advise them on food hygiene. A personal approach by the Medical Officer of Health to Secretaries of Hospital Management Committees met with a prompt and warm response and in consequence the department has instituted a complete survey of hospital catering in the City. This has enabled the Department to carry out food hygiene inspections in depth and to produce advisory reports for the hospital authorities and up to the end of the year reports for 17 hospitals had been produced and appropriate follow-up visits initiated. In order to produce a uniformity of approach a small working party has been set up in the department.

It is not surprising that in a commercial centre as large as Manchester that there should be large number of accidents to workers in offices and shops. It is with regret that the department had to investigate a fatal accident to a caretaker using a lift at a weekend. In this instance the situation necessitated specialist investigation and a consulting engineer had to be called in. Although the department is acquiring increasing expertise in lift and hoist technology we have yet to go some distance before full technical expertise is achieved.

During the year 253 accidents were reported to the department under the provisions of the Offices, Shops and Railway Premises Act compared with 254 in the preceding year.

Two cases were taken against an employer for failing to report accidents to his employees. How many accidents are reported are known. How many occur and should be reported but are not is not known.

Over a period of many years the function of the environmental health service, while formally remaining a matter of enforcement, has, in fact, become largely an instrument of supervision, instruction and education. The accent has become more the promotion of better health than the prevention of ill health. Nevertheless, it is necessary from time to time to have recourse to legal action and it is, therefore, somewhat disappointing to find that the Courts are sometimes inclined to afford less than adequate support to the enforcement of environmental standards. Despite the increase in the maxima of fines, punishments awarded are often less severe than the offences merit and reduce the sanction of the public health code. Monetary inflation has eroded the effect of small fines and often the punishment is less than the local authority spends in officers' time attending the Court, let alone in investigating and presenting the case. In instances where a prosecution results from the careful consideration by a Committee of the incident the views of such bodies ought to carry great weight with the Court.

The department continues to organise a training scheme for pupil public health inspectors. An average of six qualified inspectors is produced annually through this training scheme and forms the most important regular source of recruitment of professional staff. Careful selection of pupils is necessary because of the large number of well qualified applicants. The variety of courses now available is also helpful in making the best use of the wide range of talents which become available.

In addition to the professional training scheme in-service and post-graduate training is also an important aspect of maintaining the department's ability to meet the needs of modern developments. During the year part-time day courses were attended by 14 members of staff of various grades and 37 attended courses lasting a day or more. Some of these latter courses took place in the evenings or weekends in officers' own time.

The number of students who successfully passed the diploma examination was five, and this included a graduate trainee. For the first time for very many years the inspectorial establishment was filled but this situation lasted only for a few weeks and at the year's end there were four vacancies in the inspectorial ranks and seven posts for technicians remained unfilled.

One member of staff was successful in passing the examinations for the M.Sc. in health physics at Salford University. The inspectorate at the year's end included four graduates, one graduate trainee, five undergraduates at Salford University and two graduates training through the diploma course.

In 1973 two members of staff died and three retired. Four were public health inspectors and one member of the administrative staff. Included in the number retired were Mr. Marshall, M. Braide and Mr. William Tomlinson, both Assistant Principal Public Health Inspectors. Mr. Braide was the senior special investigation inspector, a post he had held for eight years, the finale to many years of public health service. This is a post of great responsibility and one in which the holder has special relationships with the medical staff. Mr. Braide gave distinguished service in this post. Mr. Tomlinson came to the department in 1964, after working with other authorities in the area and spent most of this time engaged in duties under the Housing Acts and in this he gave loyal and skilled service. The department hopes that both will enjoy a long and happy retirement.

The department suffered a severe loss by the death of Mr. Alfred Young who was the principal public health inspector in charge of housing matters.

Mr. Young was 64½ and had indicated his desire to retire in the late autumn but whilst on leave suffered a fatal heart attack.

After training in the Health Department at Salford, Mr. Young secured his first appointment as a public health inspector at Bootle in May, 1935. He was appointed as a district public health inspector in this department in June, 1936 and served a total of 37 years. During this period he served as a district inspector, senior inspector and as a specialist inspector successively in drainage, food hygiene and housing.

After serving as an assistant senior housing inspector he was promoted to Principal Public Health Inspector (Housing) in August, 1964 and in this capacity played a leading part in the implementation of successful drive against unfit housing initiated by the Health Committee. He was, of course, well known to successive members of that Committee by reason of his organisation of Committee visits to Clearance Areas.

Mr. Young achieved a national reputation as an expert in housing matters and was held in the highest esteem by his colleagues in all departments of the Corporation. In this department his service was distinguished by his integrity, loyalty and industrious application to a long term task, and it was pleasing that he was able to see the completion of the major programme of representations of unfit houses.

The department was greatly saddened by Mr. Young's death but recognises the immense contribution he made to the City in his 37 years of service.

This is the last occasion on which an account of the department's work in environmental health will appear in this form. Successive annual reports have recorded the achievements in improving the environment and have highlighted deficiencies and pointed ways in which future effort should be directed. In these reports a century of progress is to be found and there should be a continuance of this record. There are clear advantages in recording the work of the department for future reference and as each instalment is prepared it offers a valuable management tool by providing an annual review of the activities of the department.

It is hoped that future reports will be prepared and that these will contain records of progress comparable with those of the past. At no time in modern history has there been so much attention focussed on the need to improve the environment as there is at this time. Most local government services are directed towards meeting the needs of only part of society but environmental health relates in its various aspects to all the people all the time.

The new District Council is to operate an environmental health service through a separate environmental health department in which the veterinary services and public health inspectorate will work together under a Director of Environmental Health. This department will also assume some functions carried out elsewhere in the health department and will clearly have important links with the new National Health Service.

Although the Medical Officer of Health will no longer head the department, medical advice will be available from the proper officer, who will serve jointly the N.H.S. and the City Council.

At the beginning of the environmental health service in the 19th century, it was doubtful which line of development would be followed—that advocated by Sir Edwin Chadwick or that of Sir John Simon. In the end the favoured path was that one determined by Sir John Simon and environmental health became medically orientated rather than having the engineering bias which Chadwick favoured.

This influence on the stream of environmental health has led public health inspectors to adopt two attributes of the medical profession. The first is a sturdy defence of the need to be able to take independent action and the second is the ability to persuade, guide and educate through reason rather than to coerce. These principles will provide a fine foundation for a progressive environmental health service.

Housing—An historical note

During the early industrial era, Manchester acted as a magnet to the population of the countryside. There was a rapid drift of agricultural workers into the city in search of work, and this was accompanied by a considerable immigration of Irish peoples and an excess of births over deaths. From 1746 to 1800 (54 years) the population increase was about 550 per annum. In the next 40 years, the average increase was over 4,000 per year, and between 1841 and 1861 it was almost 5,000 persons per year.

A population growth of this magnitude swamped the existing housing accommodation. The first arrivals crowded the existing accommodation; rooms were sub-let to house families, and attics and cellars were used as living accommodation. In 1840, 15,000 people lived in 3,500 cellars and 12½% of the working population lived underground.

Sanitary conditions were appalling. Water supplies were scanty. There was no proper drainage, sewerage or street cleaning or refuse removal. Epidemics were rife, and typhoid, cholera and smallpox broke out at various times. Merchants and manufacturers moved out from this squalor and their houses were converted into houses let in rooms without any control.

The housing of the working people was indescribably bad in the main. They lived in back to back houses; each had a floor space of about 16 square yards. There was no back yard or through ventilation. Privy middens and ashpits were too few. It was common for there to be one privy for 12 dwellings in which 70 to 80 people lived. About a third of the population of

Manchester lived under these conditions, and speculative builders, not restricted by regulations, devised ingenious means of housing the largest number of people on the smallest pieces of land.

A large number of small houses, often associated with factories, were built in Chorlton-on-Medlock and Ancoats. They were little more than brick boxes with slate lids, and they had no amenities. Additionally, they were built at a density of about 120 to the acre.

Between 1820 and 1845 there was a boom of building by speculative builders erecting houses to let. Fields and open spaces were covered with houses, built without official control as to planning or quality, and the whole area was a network of mean, narrow, untended streets.

Serious problems faced the Manchester Borough Council when it was formed in 1842. In 1844, under the Manchester Police Regulations Act, they obtained powers to prevent the construction of houses without a privy or ashpit and to require owners of existing houses without them to provide them. The result of this legislation was that no more back to back houses were built in the municipal borough of Manchester.

After the 1844 Act came into force, the Council set up a Building and Sanitary Regulations Committee to deal with housing regulations, and, by 1851, the Committee had dealt with 18,000 dwellings or more than a third of those in Manchester. The Manchester Corporation New Streets Act, 1853, gave the Council power to abolish cellar dwellings, although this took over 20 years to achieve.

In 1865, under the Manchester Improvement Act, the Corporation received authority to make byelaws to regulate new buildings and the environment of existing houses. Although meagre, the new byelaws were a decided advance. A minimum street width of 30 feet was prescribed, each house had to have a private yard of 70 square feet, the window area of the living room was to be at least 10 square feet, and each living room had to be nine feet high. A separate water supply was to be provided for each house.

Buildings or parts of buildings unfit for human habitation could be closed. These powers were put into operation in 1866 and are an important land mark in the movement for better housing conditions and the compulsory clearance of slums.

The Manchester Waterworks and Improvement Act, 1867, contained a clause by which a house certified by two inspectors or by the medical officer of health as unfit for habitation could be closed without compensation. The Council also worked under the Artisans and Labourers Dwellings Act, 1868, so far as it gave powers to insist on structural alterations or demolition where houses were unfit. The practical result was not to close the house but to induce the owner to repair it.

A Health Committee was set up in 1868. This took over the work of the Buildings and Sanitary Regulations Committee and appointed Dr. Leigh as the first Medical Officer of Health.

The Artisans and Labourers Dwellings Act of 1875 gave power to demolish slums and rebuild on the site, but the Health Committee decided to continue a policy of reconditioning instead of considering a more drastic action. The Medical Officer of Health made a map of all the houses in the City, coloured according to the age of the buildings, and he then reported that the inner ring needed more drastic treatment than reconditioning but doubted the advantage of tenements. The cost of clearing and rebuilding the whole of the inner zone would have been seven to eight million pounds, and this figure caused the Committee to adhere to the reconditioning schemes.

In 1885, the Housing Sub-Committee was constituted, and it was of the opinion that its first duty was to abolish the back to back houses in the City. Thirty-five thousand people then lived in 10,000 such houses. Although some demolitions were ordered and flats erected to rehouse tenants, the general abolition of back to back houses was coupled with reconditioning and, despite doubts with regard to stability, virtually all the back to back houses were converted into through houses. The altered houses in the centre became the habitat of the very poor, which produced another problem to the local authority as to how to deal adequately with this altered property whose demolition would displace people who could not afford the rents of the new houses, and despite the Medical Officer of Health's recommendations to the contrary, the Council were forced to consider flats for these people. Later it was decided to restrict the height of future flats to three storeys and to erect two storey tenements on cleared sites.

By the end of the nineteenth century the Corporation realised that these improvement schemes would displace many persons and decided to acquire 237 acres at Blackley for the provision of allotments and houses.

The new 1890 building byelaws required damp proof courses, site concrete and yards of 150 square feet, and they could not have a density of more than 40 to the acre. These houses were built in long rows, in narrow streets and had no gardens. They were narrow fronted, although some had bay windows. Some houses had waterclosets but baths were not generally installed. The Artisans Dwellings Act of 1890 gave local authorities further powers to demolish insanitary buildings and sanction the principle of municipal building. The reconstruction scheme was presented to the Council in 1891, and this covered certain of the worst City areas. Buildings erected under this scheme consisted of tenement blocks at Oldham Road, Chester Street, Pollard Street and Pott Street.

In 1894, the completion of the main drainage and waterworks schemes enabled the City Council to deal with the City's most urgent needs of the disposal of sewage and the provision of a satisfactory water supply, and from 1900 onwards the Health and Unhealthy Dwellings Committee entered into an ambitious reconditioning programme, including rapid conversions of pailclosets to waterclosets. In 1904 there remained between 70,000 and 80,000 pailclosets and 9,000 privy middens. During the conversion programme, the opportunity was taken to carry out other improvements to the houses, such as the relaying of yards and drains and rebuilding yard walls. Between 1891 and 1930, 85,495 pailclosets, privy middens and slop closets were converted.

Better housing became a popular demand and better standards were envisaged and demanded by the public. In 1908, new byelaws were obtained which required 250 square feet of private yard space, increased space between buildings and had the effect of reducing housing density. Staircases had to be lit and ventilated and provided with a handrail. Public opinion was ahead of byelaw standards and there was a general demand for houses with baths, despite the fact that they were not required by the byelaws. Many tenants approached landlords to have baths and hot water installed in their houses and undertook to pay about 6d per week extra for rent if the alterations were made.

The Health Committee dealt with houses for many years but following the first world war it was realised that building houses on an unprecedented scale was necessary and demanded a special committee. The Housing Committee was, therefore, created to deal with the building of houses, although the management and letting of them was retained by the Health Committee until 1932.

The Housing Act, 1930 made possible the first assault on the clearance of unfit houses. Government grants were made in respect of families rehoused and, later on, houses provided to replace unfit houses. Subject to the approval of the then Ministry of Health, the Council was permitted to declare any area unhealthy, to make a clearance order and to purchase compulsorily the land in or near the area, but this power of compulsory slum clearance also involved the obligation to ensure that displaced tenants were provided with adequate alternative accommodation.

Opposition to the early endeavours was strong and organised but died as the increased standards of amenity were more fully realised. Surveys in the clearance areas revealed a large percentage of damp houses in varying stages of disrepair, with inadequate facilities and the extent of disrepair defied the best efforts of even good tenants to maintain clean and comfortable conditions. The rents of these slum houses soared despite rent control, and money which could have been better used was spent on fuel to combat dampness and light to offset overshadowing, insecticides to control vermin infestations and to obtain bath and laundry facilities at public baths and wash houses. Thus, the real rent of these houses probably exceeded those of the Corporation houses.

The Housing Acts of 1936 and 1957 consolidated powers to achieve the clearance of unfit houses.

Throughout the last 130 years, there has been a continuous effort to improve the living conditions of the citizens of Manchester, and this has been done by the repair of houses to abate nuisances and eliminate defects. To improve dwellings in layout and scale of amenity, a major effort has been the removal of the dwellings in the City which were so defective or inadequate as to defy improvement or repair and, in this connection, the City Council has used what powers it has under both public and private statutes.

Between 1885 and 1930 under local act powers, 27,500 houses were closed and while many of these were repaired and relet, over 7,000 were demolished. By using the powers under the Housing Act, 1930 there was a clearance programme under way by 1934 and before the second world war brought housing action to a close, 9,076 unfit houses were demolished.

In 1954 the Government asked local authorities to estimate how many unfit houses there were in their areas. After appraising the housing stock, the Medical Officer of Health reported that 67,893 houses were to be regarded as needing clearing in the next 15 years. This total, found within a radius of three miles from the Town Hall, comprised the basis of the post war clearance programme which it was intended should be represented by the end of 1973.

In 1964 the Minister asked for a revised estimate of unfit houses, and further appraisal raised the total by 7,000 and, in 1967, the survey was completed and, with the addition of 7,067 houses, the programme consisted of 81,960 houses believed to be unfit.

In an effort to speed up the clearance of unfit houses, the department was asked to bring forward the date of completing the representation by one year. This was done and the Medical Officer of Health made his last representation in December 1972 instead of December 1973.

Of the 81,960 houses in the original programme, 70,077 were represented as being unfit and included in 1,276 clearance areas. A total of 11,090 was dealt with in various other schemes, or as individually unfit houses, and the remaining small number was eliminated from the programme for various reasons, such as them no longer being dwellings or not being found unfit on detailed survey.

In dealing with this large number of houses, a number of facts emerged. Firstly, the programme delineated the houses in proposed clearance areas, and the forecast areas were remarkably accurate. Secondly, in establishing the areas many more houses were inspected than were included in the original survey so that it is estimated that over 85,000 houses were inspected in executing this programme.

From the beginning an exacting standard was required. In every case of doubt, the advantage has been given to the house owner. As a consequence of this, the percentage of houses represented as unfit where the Minister has changed the category has been remarkably low and is even more remarkable when it is considered that many of the changes were in respect of buildings which the Minister thought ought no longer to be regarded as houses and could not, therefore, be unfit for occupation.

The high standard set has had a number of consequences. Many public health inspectors have taken part in this work and have moved elsewhere to take that standard with them, so activity here has been influential elsewhere. The standards set in the City have been reflected in national and regional house condition surveys for inspectors experienced in Manchester's standards participated in them.

In pursuing a policy of improving living conditions, the Council has had to require the demolition of those houses which could not be regarded as satisfactory dwellings. In carrying out this policy, the Corporation has often been unfairly given the reputation of being dominated by the desire to demolish and redevelop. Nevertheless, in dealing with the 82,000 houses in the clearance programme, the Health Department has consistently followed the aims of trying to deal with the worst houses first and to deal with all unfit houses. This has led to large scale demolition of areas of bad housing and has given opportunity for the later redevelopment of the released sites but the redevelopment has followed and has not been the force behind the clearance of unfit houses.

Alongside this policy of clearance, the Health Department has continued to secure the repair of houses and to encourage their improvement. As the older unfit houses have been removed, the need for the abatement of nuisance has diminished but the opportunity for improvement has increased, and applications for improvement grants have continuously increased.

The completion of the representation for the first post war clearance programme is a major achievement, but it has to be remembered that houses are mortal and eventually must die. Accordingly, although on a reduced scale, there will, of necessity, be a continuing programme of clearance.

This is in no way to be taken that there is no interest in the improvement of houses. The contrary is true. The commitment to improved living conditions means that houses must be improved as well as demolishing those which are unfit. Some of the houses originally included in the clearance programme were, in fact, taken out of it when detailed survey showed that they could be satisfactorily improved.

The key note is satisfactory improvement and what the Corporation will be aiming at is not to use so called improvement to prevent the removal of unfit properties but to create worthwhile living conditions which will be valued dwellings until the next century.

The satisfactory improvement of dwellings is an exacting and complex operation and not one which can be the subject of a "rubber stamp" procedure if the large sums of public and private money involved are to be expanded wisely. The increased flow of improvement grant applications needs to be further increased to continue the process, now over 130 years old, of securing better housing conditions.

In that period of time, a succession of Councils, Health Committees, Medical Officers of Health and public health inspectors had been dedicated to this task and will, without question, continue in the future to seek the continued improvement of housing standards.

Water Supply

The City's principal source of water supply are Windermere, Ullswater and the impounding reservoirs of Thirlmere and Haweswater in the Lake District and, to a lesser extent, the Longdendale Valley on the Cheshire-Derbyshire border. Distribution is by trunk mains, service reservoirs and mains, relying for the most part on gravity to the limits of the distribution areas, but with booster stations maintaining the pressure in higher level districts. Waters from the Lake District now pass through the new Watchgate Treatment Works, where they are subjected to simple rapid gravity filtration followed by super-chlorination and contact, with pH correction and chlorine residual control of the finished water.

Extensive routine sampling and examination of the water supplies were undertaken by the Waterworks Department's laboratory. In addition, public health inspectors obtained 48 samples for chemical analysis and 23 for bacteriological examination from dwelling-houses, canteens, hospitals and day nurseries.

Thirty complaints of the quality of the supplies at different premises were received and investigated. Sixteen were concerned with discolouration and three were in connection with illness which, however, investigations and examinations did not support. Five complaints referred to a peculiar taste and/or smell in the water, three were complaints about animalcules, and three concerned lead content. When necessary, further samples were taken and found to be satisfactory.

The Engineer and Manager of the Manchester Corporation Waterworks Department was informed of all complaints received and of the results of all chemical and bacteriological examinations of samples taken by the inspectors.

The Public Analyst declared all water samples to be chemically satisfactory, subject to satisfactory bacteriological reports from the Public Health

Laboratory. These are summarised in the following statement:—

District	No. of sample	Samples free from coliform bacteria	Faecal coli found		Non-faecal coli found		Service reservoir	Source
			No. of samples	No. per 100mls.	No. of samples	No. per 100mls.		
Ancoats	1	1	–	–	–	–	Heaton Park/ Denton	Haweswater/ Longdendale
Baguley	1	1	–	–	–	–	Woodgate Hill	Haweswater
Benchill	1	1	–	–	–	–	Woodgate Hill	Haweswater
Blackley	1	1	–	–	–	–	Heaton Park	Haweswater/ Thirlmere
Cheetham	1	1	–	–	–	–	Heaton Park	Haweswater/ Thirlmere
Crumpsall	1	1	–	–	–	–	Heaton Park	Thirlmere/ Haweswater
Gorton	1	1	–	–	–	–	Denton	Haweswater/ Longdendale
Levenshulme	1	1	–	–	–	–	Denton	Haweswater/ Longdendale
Longsight	5	5	–	–	–	–	Denton	Haweswater/ Longdendale
Moston	2	2	–	–	–	–	Woodgate Hill	Haweswater
Newton Heath	1	1	–	–	–	–	Godley	Longdendale
Northenden	1	1	–	–	–	–	Woodgate Hill	Haweswater
Withington	1	–	–	–	1	1	Denton	Haweswater/ Longdendale
Woodhouse Park	5	5	–	–	–	–	Woodgate Hill	Haweswater

In all instances the water was chlorinated.

The Engineer and Manager of the Manchester Corporation Waterworks Department supplied the following information concerning Manchester's water supply:—

1. (a) The water has been of a satisfactory quality throughout the year.
   (b) In quantity the supply has been adequate.

2. Summary of laboratory results

(a) Chemical

(i) Thirlmere and Haweswater

At present only slight variations occur in the chemical analyses throughout the year and the results below may be regarded as typical:—

	Thirlmere	*Haweswater*
pH	7·6	6·5
Colour	10	12
Turbidity as ppm, silica scale	0·4	0·5
	(parts per million)	
Free acidity as CO_2	2	2
Total alkalinity as $CaCO_3$	4	18
Total hardness as $CaCO_3$	11	18
Chlorides as Cl	7	8
Nitrates as N	0·04	0·01
Nitrites as N	nil	nil
Total ammonia as N	0·02	0·07
Oxygen absorbed from $KMnO_4$, 4 hours at 27°C	0·8	1·2
Silica as SiO_2	3	2
Iron as Fe	0·05	0·10
Manganese as Mn	nil	0·10
Fluoride as F	0·10	0·10

The water leaving Thirlmere is treated with lime for pH control and is chlorinated at the straining well. Re-chlorination is carried out after the Middlebrook Strainers prior to distribution.

The Haweswater water is strained and chlorinated at Garnett Bridge and it is re-chlorinated and limed at Woodgate Hill before distribution.

Both waters are non-plumbosolvent after treatment.

(ii) Thirlmere and Haweswater distributed supplies

Frequent samples are taken throughout the distribution system and an analysis of the mixed Thirlmere/Haweswater supply taken from a consumers' tap was as follows:—

pH	8·1
Colour as ppm. platinum	9
Turbidity as ppm. silica scale	0·9
	(parts per million)
Free acidity as CO_2	nil
Total alkalinity as $CaCO_3$	17
Total hardness as $CaCO_3$	23
Chlorides as Cl	9
Nitrates as N	nil
Nitrites as N	nil
Total ammonia as N	0·02
Oxygen absorbed from $KMnO_4$, 4 hours at 27°C	0·7
Silica as SiO_2	2
Iron as Fe	0·04
Manganese as Mn	0·01
Fluorides as F	—

(iii) Longdendale Water—raw water inlet to Arnfield treatment plant

As with Lake District waters, this water is subject to only very slight seasonal variations, and the results which follow are typical of the water arriving at the treatment plant:—

pH	5·2
Colour as ppm. platinum	29
Turbidity as ppm. silica scale	8·1
	(parts per million)
Free acidity as CO_2	4
Total alkalinity as $CaCO_3$	7
Total hardness as $CaCO_3$	28
Chlorides as Cl	12
Nitrates as N	nil
Nitrites as N	nil
Total ammonia as N	0·06
Oxygen absorbed from $KMnO_4$, 4 hours at 27°C	1·5
Iron as Fe	0·35
Manganese as Mn	0·06
Fluorides as F	nil

This manganese-bearing water also has a high colour and full chemical treatment, involving chemical coagulation, sedimentation, filtration, pH correction and disinfection, is necessary. The results below were obtained from a house tap sample on this supply.

pH	8·5
Colour as ppm. platinum	5
Turbidity as ppm. silica scale	less than 1
	(*parts per million*)
Free acidity as CO_2	not detectable
Total alkalinity as $CaCO_3$	10
Total hardness as $CaCO_3$	47
Chlorides as Cl	18
Nitrates as N	0·5
Nitrites as N	0·002
Oxygen absorbed from $KMnO_4$, 4 hours at 27°C	1·5
Silica as SiO_2	4
Iron as Fe	0·1
Manganese as Mn	0·02
Fluorides as F	less than ·1

(b) Bacteriological summary

The two group headings are (i) Raw waters, which includes partially treated waters, and (ii) distributed chlorinated supplies. The final group includes water leaving the treatment plants and consumers' premises.

Source	Total number of samples	Samples free from coliform	Faecal coli present		Non-Faecal coli present	
			No. of samples	Counts per 100 mls	No. of samples	Count per 100 mls
1. Raw waters	26	—	in most cases, presumptive tests only were made.			
2. Distributed waters	5910	5549	56	1–3+	307	1–18+

All waters have been continuously chlorinated throughout the year. Aftergrowths of coliform bacteria have occurred on mains deposits and some samples of water, taken after mains disturbances, have given small coliform counts.

3. Plumbosolvency

All waters are dosed with lime for pH correction to reduce the possibility of lead uptake in the supply. Most of the results obtained during the last year have shown lead values well below the WHO standards.

4. Radioactivity

Rainfall samples are collected over a period of 14–15 days, the containers being changed on the 1st and 15th of each month. Weekly samples are also taken of Longdendale and Haweswater waters.

The results present the gross beta activity expressed as "pico curies per litre of Strontium 90/Yttrium 90".

Source	Period	Radioactivity as pCi/1	
		Range	Weighted mean
Rainfall	1st quarter	nil to 114·6	15·8
	2nd quarter	nil to 13·4	8·5
	3rd quarter	5·2 to 32·4	9·6
	4th quarter	2·9 to 26·8	8·4
Longdendale raw water	1st quarter	<1·0 to 5·9	3·0
	2nd quarter	<1·0 to 3·9	2·7
	3rd quarter	1·1 to 4·4	2·7
	4th quarter	<1·0 to 4·0	2·1
Longdendale final water	1st quarter	1·31 to 4·8	3·4
	2nd quarter	<1·0 to 3·0	1·9
	3rd quarter	<1·0 to 3·2	2·0
	4th quarter	<1·0 to 3·7	2·0
Haweswater	1st quarter	2·1 to 12·2	3·8
	2nd quarter	1·9 to 8·3	2·9
	3rd quarter	1·2 to 6·1	2·8
	4th quarter	1·0 to 2·9	1·8
Thirlmere	1st quarter	1·2 to 7·8	3·4
	2nd quarter	<1·0 to 5·2	3·1
	3rd quarter	1·0 to 4·6	2·5
	4th quarter	<1·0 to 3·5	2·2

Rainfall for the above quarters at Denton measured 68, 64, 151 and 130 mms respectively.

5. Action taken in respect of any form of contamination

Should contamination occur in the distribution system, flushing, swabbing and, if necessary, re-sterilisation of the main are carried out. Bacteriological samples are taken and the main is not put back into service until satisfactory results have been obtained.

6. The number of dwelling houses supplied direct is 173,973, no houses being supplied by standpipe, and the population receiving this service is 531,270.

Food Supply

Statutory instruments dealing with the composition and labelling of food enacted during the year include the following:—

The Skimmed Milk with Non Milk Fat (Amendment) Regulations 1973, which were made on 1st February 1973 and came into operation on 6th March 1973, further amend the principal regulations with reference to description and composition of certain foods.

The Separated Milk Regulations, 1973 were made on 28th February, 1973 and came into effect on 1st April, 1973. They prohibit the delivery for, or in pursuance of the sale for human consumption of separated milk other than semi-skimmed milk or skimmed milk delivered as such.

The Arsenic in Food (Amendment) Regulations, 1973 were made on 14th June, 1973 and came into operation on 14th July, 1973. They amend the principal regulations and extend the exemption from arsenic limits already specified, to food for which the maximum permitted arsenic content is prescribed by any other instrument made under the Food and Drugs Act, 1955.

The Lead in Food (Amendment) Regulations, 1973, made on 14th June, 1973, came into operation on 14th July, 1973. They, too, amend the principal regulations by extending the exemptions from the lead limits specified for food (other than edible gelatine) for which the maximum permitted lead limit is prescribed by any other instrument made under the Food and Drugs Act, 1955.

The Milk and Dairies (Semi-Skimmed and Skimmed Milk) (Heat Treatment and Labelling) Regulations, 1973, were made on 15th June, 1973 and came into operation on 18th July, 1973. They specify requirements for the heat-treatment, sampling and labelling of semi-skimmed and skimmed milk.

The Milk and Dairies (Milk Bottle Caps) (Colour) Regulations, 1973, were made on 18th June, 1973, came into operation on 1st December, 1973, and prescribe the colours of caps and lettering to be used in labelling with relation to designated milks sold in bottles.

The Colouring Matter in Food Regulations, 1973, were made on 26th July, 1973 and, apart from Regulations 14 and 16(2) which came into operation on 30th August, 1973, do not become effective until 1st July, 1974, when they will supersede the Colouring Matter in Food Regulations, 1966, and implement an E.E.C. Council Directive of 23rd October, 1962, relating to the use of colouring matter in foods intended for human consumption.

The Common Agricultural Policy (Wine) Regulations, 1973, which were made on 26th July, 1973, and came into operation on 1st September, 1973, implement the provisions of specified regulations of the European Communities concerned with the production and marketing of wine and related products.

The Imported Food (Amendment) Regulations, 1973, which were made on 27th July, 1973, came into operation on 1st September, 1973, and amend the principal regulations of 1968 so as to implement the provisions of various E.E.C. directives in relation to health certificates and official certificates, and to extend these provisions to poultry meat.

Hygiene

The Food Hygiene (General) Regulations, 1970 and the Food Hygiene (Market, Stalls and Delivery Vehicles) Regulations, 1966 are the principle instruments for enforcing good food hygiene practice.

There are about 6,500 premises in the City subject to the regulations and health inspectors found at 324 of them some failure to observe the requirements. Contraventions were reported at 77 food delivery vehicles, hawkers' barrows and market stalls.

Minor irregularities were dealt with informally but legal proceedings were instituted in respect of 88 offences. Fines and costs totalling £606 were imposed.

Closure of insanitary food premises

Section 34 of the Manchester Corporation (General Powers) Act, 1971 contains powers to close insanitary food premises of all kinds. In the case of six premises, comprising a cafe, a butcher's shop, two licensed clubs and two bakehouses, the department was of the opinion that they were in such a condition as to justify consideration for closure. In the case of each of the first four mentioned, prompt remedial action by the persons having control of the business obviated the necessity to apply for interim closing orders, but in the cases of both the bakehouses closure action was initiated. However, prior to the cases being heard conditions had so improved that the applications for interim closing orders were withdrawn. This power continues to be a valuable asset to the department in its food hygiene work.

Night cafes

Part V of the Manchester Corporation (General Powers) Act, 1971 made it compulsory for cafes to be registered if they opened between 11.00 p.m. and 5.00 a.m. Penalties were prescribed if such premises were conducted without being registered. The 28 premises registered at 31st December were visited by the department's inspectors.

Licensed premises

The arrangement whereby a health inspector accompanies the Licensing Justices to club and similar premises continued and assisted toward the adoption of improved standards of food hygiene by proprietors.

Education

As a further contribution towards the achievement of higher standards of hygiene in the food industry health inspectors addressed different trade and associated organisations. At the invitation of one hospital authority a principle public health inspector continues to be a member of their food hygiene working group.

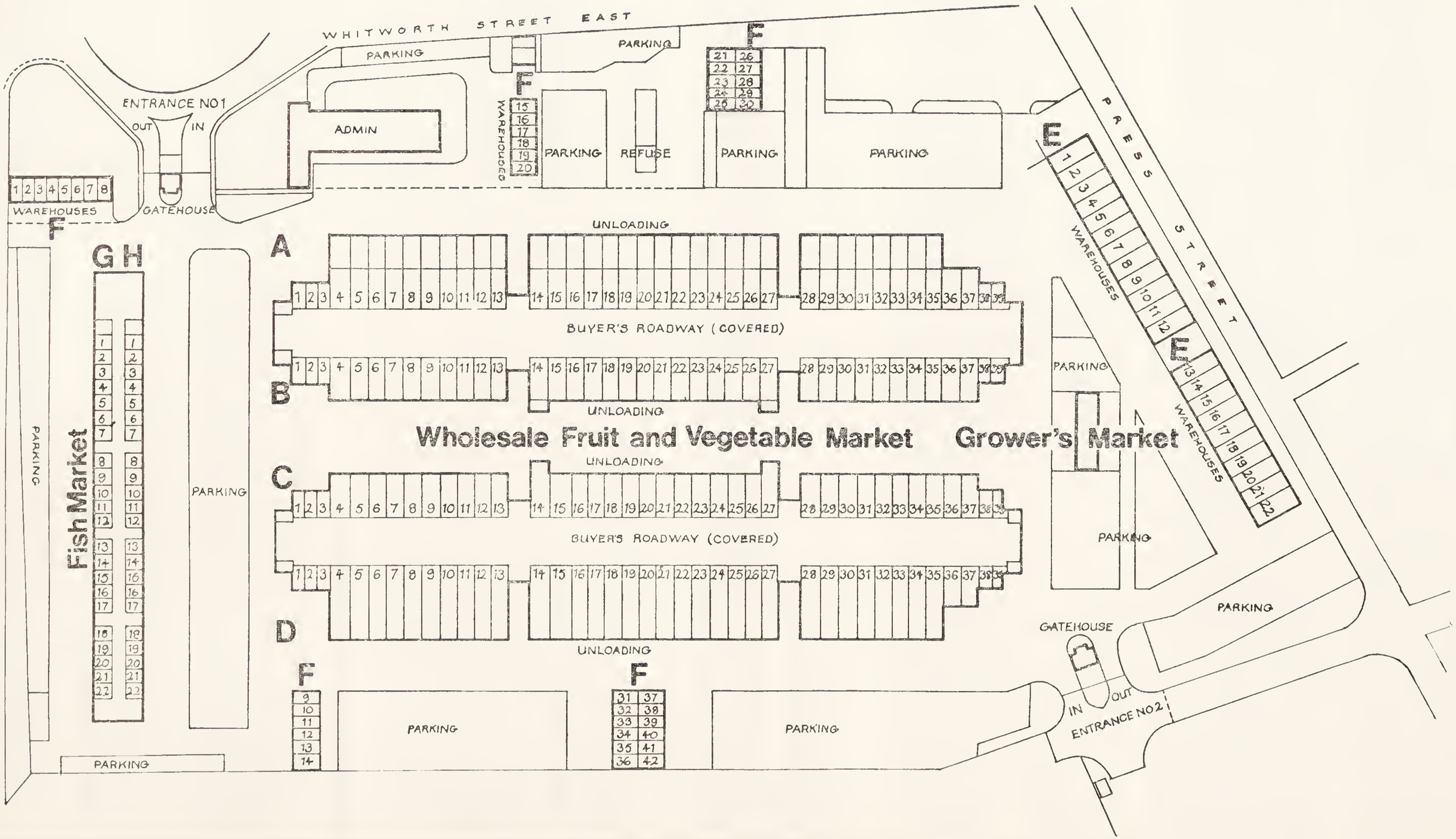
New Smithfield Market

In the hygiene of the marketing of vegetables, fish and fruit a long-standing need for improvement was secured with the vacation of the old wholesale markets in the City centre and the opening by the Markets Committee of the new Wholesale Market extending to 47½ acres in Openshaw and illustrated diagrammatically on the following page.

Food poisoning

The number of food poisoning incidents notified and/or ascertained was 83 and investigations revealed that 208 cases were involved. In addition, 98 symptomless excreters, many of whom were associated with the cases, were discovered. The organisms responsible were identified in all cases, as the

The new Smithfield Market in Openshaw



following table illustrates, together with the foods implicated, where ascertainable:—

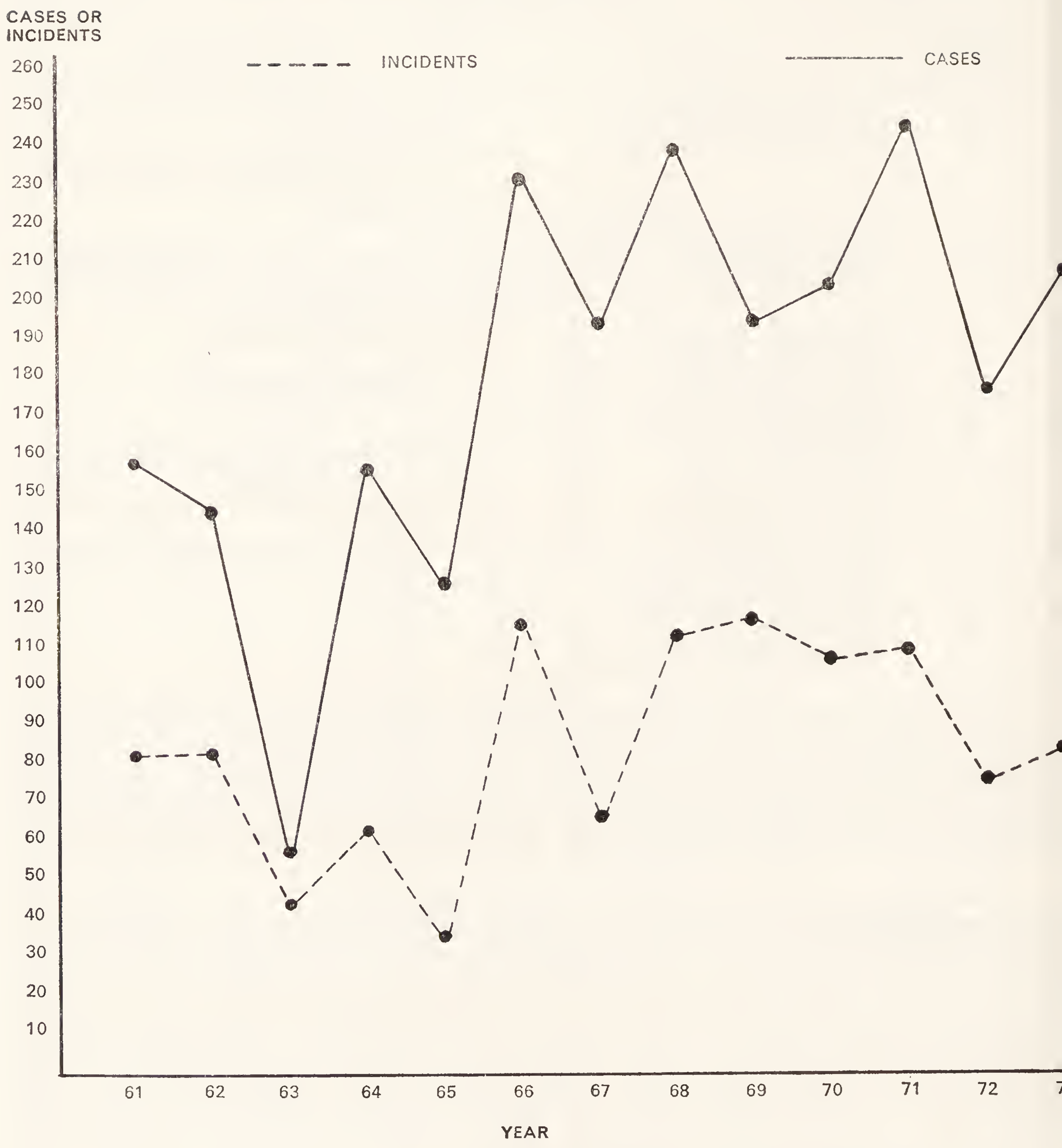
Number of cases	Organism	Foods implicated
72	*Clostridium welchii*	72—Minced beef.
58	*Salmonella typhimurium*	20—Chicken. 7—Foods eaten on foreign holiday. 4—Cooked meats. 2—Turkey.
12	*Salmonella thompson*	—
11	*Salmonella agona*	1—Food eaten on foreign holiday.
11	*Salmonella muenchen*	4—Foods eaten on foreign holiday. 2—Probably turkey.
8	*Salmonella newport*	1—Probably sausage.
7	*Salmonella livingstone*	—
7	*Salmonella stanley*	1—Hospital infection.
4	*Salmonella bredeney*	—
4	*Salmonella enteriditis*	—
4	*Salmonella virchow*	1—Food eaten on foreign holiday.
3	*Salmonella dublin*	1—Probably pork.
1	*Salmonella chester*	1—Food eaten on foreign holiday.
1	*Salmonella indiana*	—
1	*Salmonella infantis*	1—Food eaten on foreign holiday.
1	*Salmonella kiambu*	—
1	*Salmonella manhatten*	—
1	*Salmonella st. paul*	—
1	*Salmonella group D*	—

Of the 83 incidents there were 4 general outbreaks involving 109 persons, 13 family outbreaks involving 33 persons, and 66 sporadic cases. Once again, foreign holidays were responsible for a high percentage of cases. Excluding the general outbreaks, 15 persons or 15 per cent of the total cases contracted illnesses whilst abroad. Summaries of the 4 general outbreaks are as follows:—

Clostridium welchii organisms were responsible for an outbreak of abdominal pains and diarrhoea in a work's canteen where 72 of 396 people were affected. The onset of the illness varied from 8–18 hours, after eating a meal of minced beef and gravy, dumplings, potatoes and peas, and persisted for 24 hours or less, and was mild in character. Faeces specimens from 25 affected persons and 27 kitchen staff, none of whom was affected, were submitted to the Public Health Laboratory for examination. Heat-resistant Clostridium welchii organisms were isolated from 23 affected persons and from nine unaffected kitchen staff. Some minced meat recovered from a swill bin was free from associated organisms.

The preparation of the minced beef is worthy of note if only to emphasise the risks involved:—80 lb. of cubed beef was minced and cooked for 1½ hours and the stock drained off and cooled. The cooked mince was placed in four bowls at floor level and cooled at kitchen temperatures for four hours and then put into a freezer refrigerator with the stock. Three days later the frozen mince was cooked in four separate ovens at unknown temperatures (thermostatic controls were defective) for 2½ hours, when gravy made from the frozen stock was added and cooking continued for ¾ hour. Plating of the meal was commenced 1¾ hours before serving and put into hot plates, five high on rings. Temperatures in the hot plates when tested varied from 39°C. to 63°C.

From the evidence presented it was obvious that one of the bowls of minced meat (sufficient to serve 100 persons) had been inefficiently cooked and/or re-cooked, and then hot-plated at inadequate temperatures for up to 1¾ hours. This theory was strengthened as 50 apprentices served 10



Food Poisoning 1961–1973

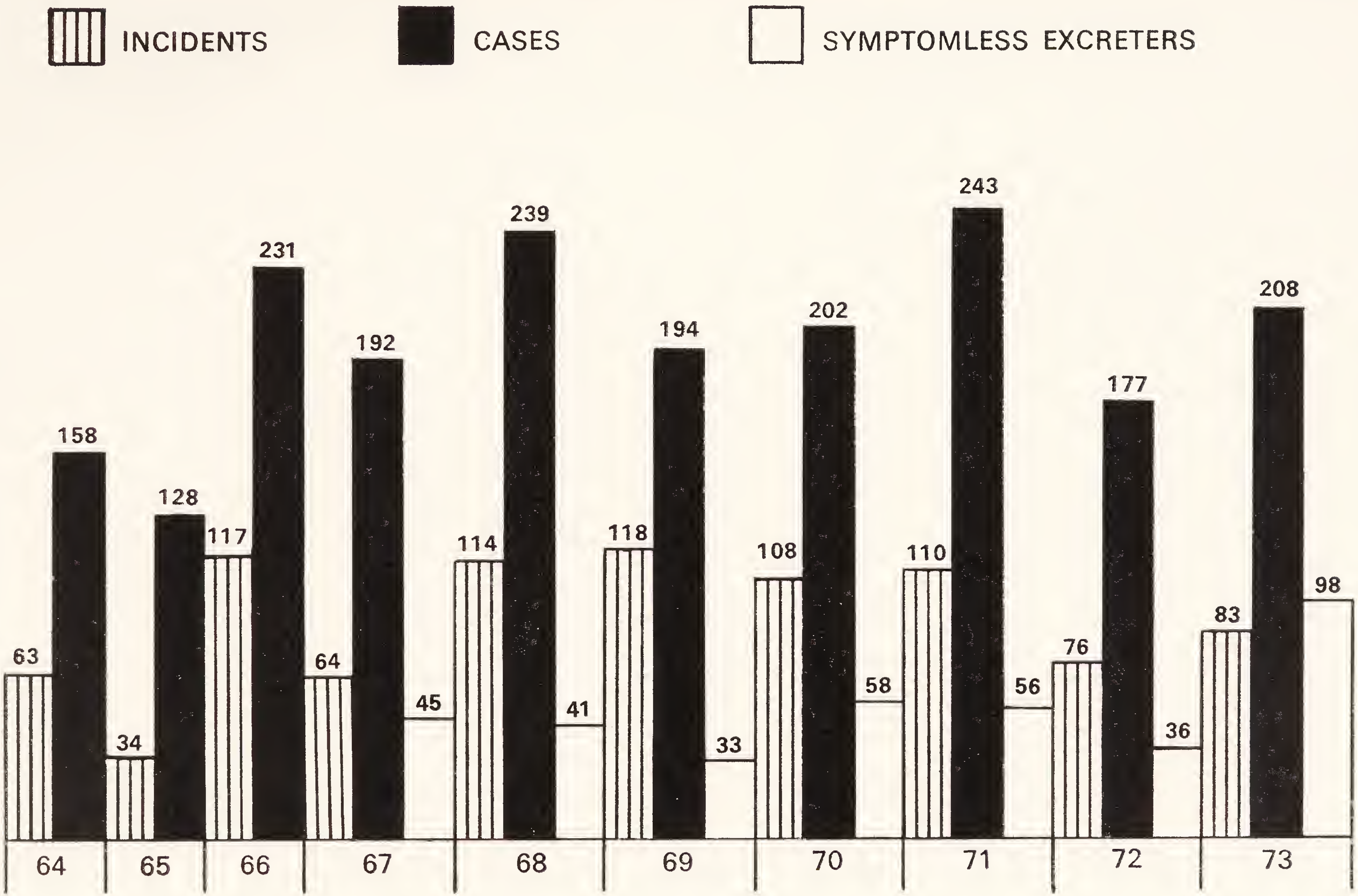
INCIDENTS AND CASES

minutes before the workmen, and 27 ladies served from a different position, were free from illness, as were 70 other persons who had baked cheese and fried egg.

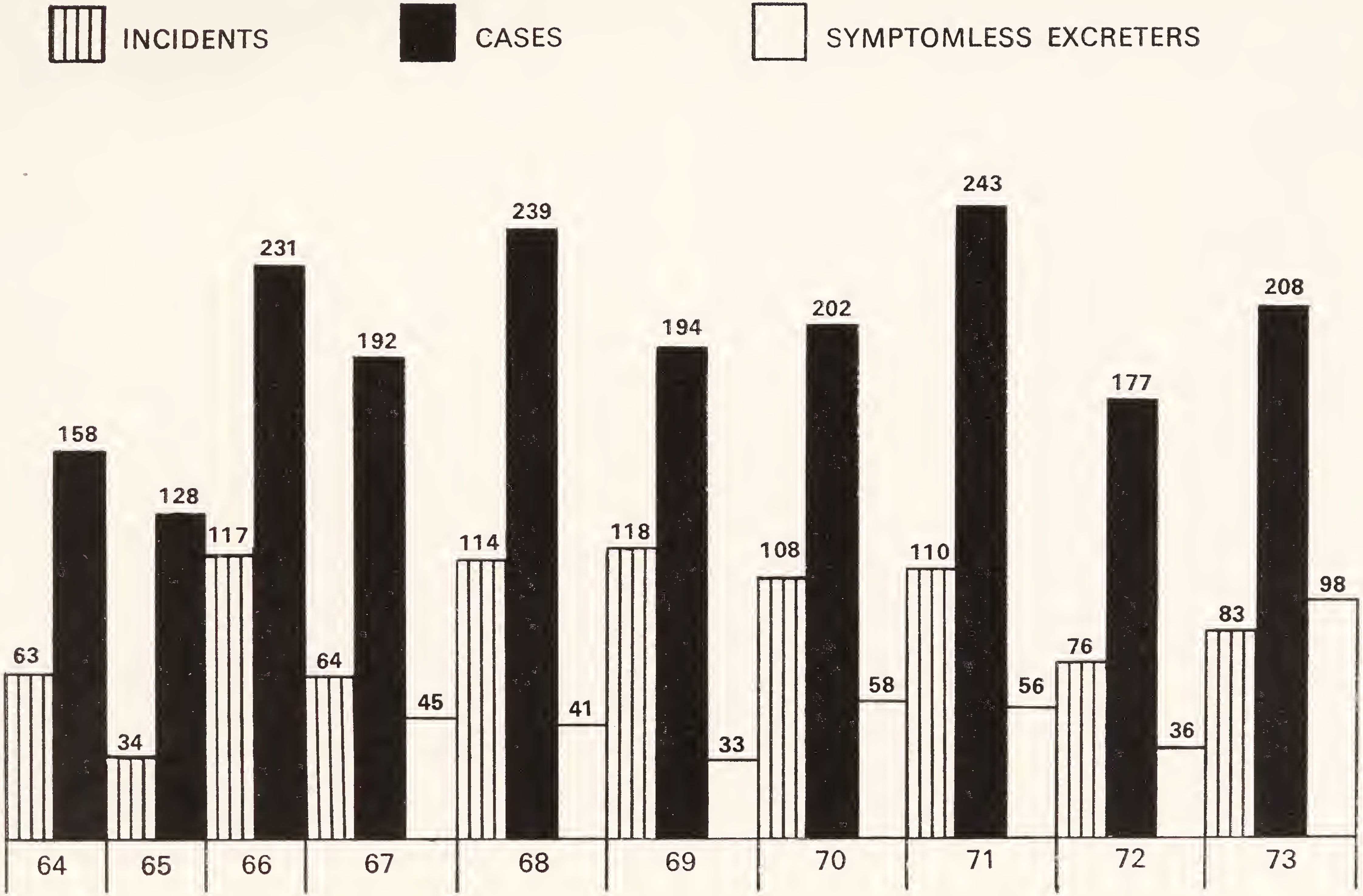
As a result of advice and recommendations given to the canteen management, all stewed meat dishes are now prepared and cooked on the day of serving and the plating of meals reduced to a minimum. Essential repairs were carried out immediately, and during the summer holiday the kitchen and facilities were subjected to an improvement scheme costing £20,000.

An outbreak of Salmonella thompson infection occurred in a maternity wing of a general hospital involving eight neonates, one mother and one nurse, together with six associated symptomless excreters. The origin of the outbreak appeared to be the mother of the index case; although she refused to admit suffering from any gastric illness, reliable evidence suggested that she and other members of the family had suffered from diarrhoea prior to her admission to hospital. Fortunately the illnesses were of a mild character

FOOD POISONING 1964-1973



FOOD POISONING 1964-1973



and, by closing the babies' ward for a short period, the hospital staff were able to contain and eliminate the infection. It could not be ascertained whether environmental infection was the cause of the outbreak or to what extent the staff were involved, but this outbreak once again highlights the need for strict hygiene control and procedures.

Following a report from an outside authority of a family of four who had suffered from classical food poisoning symptoms after attending a birthday party at a Manchester hotel, investigations revealed that 64 persons were involved in an 80th birthday party celebration at which a buffet supper had been provided. This consisted of warm chicken quarters, warm meat pies, warm sausage rolls, fish salad, various sandwiches, cakes, trifle and birthday cake.

All 64 persons were visited by this and other authorities, and it was discovered that 28 people had suffered from symptoms, a few of which were a few days after the party and seemed more indicative of a virus infection. Specimens of faeces from 44 persons were submitted for examination, and Salmonella typhimurium was isolated from 26 and Salmonella agona from one, of which the agona and six typhimurium cases were symptomless. Only three of the positive isolations denied eating chicken, and two of these were possibly subsequent cross-infections.

The history of the chicken quarters was interesting. Four-hundred cooked and deep frozen pieces were delivered to the catering establishment from a Lancashire town. The chickens had been cooked and quartered in another Lancashire town as follows: Frozen birds of approximately 2 lb. weight were thawed in running water, cooked in an electric oven for 2–2½ hours at a temperature of 175°F. The birds were then cooled in running water, quartered and frozen ready for delivery. Beef and other meats are also prepared at the same premises.

No reports of illnesses were received from staff meals and other functions where over 300 chicken pieces were reheated by deep-frying in chip pans. The reheating of the 60 chicken quarters for the birthday party was significant. These were delivered to a kitchen at 8-20 p.m. for serving at 9-15 p.m., and there appeared to be some confusion as to whether they had been defrosted. Before reheating, they appeared wet and were wiped with clean tea towels before they were immersed, 12 at a time, in 3 in. of hot fat in a roasting tin on a gas cooker. This necessitated five cookings in less than one hour and no doubt the fat must have become cooler after each reheating.

No positive isolations were made from two chicken pieces from the same batch, or from six from a subsequent delivery, but Salmonella typhimurium was isolated from a washed plate; nine other environmental swabs and three drain swabs were negative.

The Salmonella typhimurium was identified as phage type I which is normally isolated from beef and milk, but the evidence suggested chicken as the carrier, probably cross-infection at the preparation premises. The reheating of the chickens was not satisfactory and the efficiency of washing-up left a lot to be desired.

A mild outbreak of Salmonella livingstone came to light after a patient in a mental hospital suffered from diarrhoea for several days. Salmonella livingstone was isolated from a faeces specimen and the patient removed to an isolation hospital. Some five weeks later two more patients suffered very mild attacks of diarrhoea for one day, with vomiting in one case, and again Salmonella livingstone was isolated.

Because of these cases, the hospital pathologist requested specimens from all patients, nurses and kitchen staff. Difficulty in obtaining specimens from mentally disturbed patients extended the sampling period to one month, during which time 38 patients, four kitchen staff and two nurses were discovered to be symptomless excreters of Salmonella livingstone, and this organism was also isolated from four patients who were thought to have had loose stools.

In this outbreak 818 persons were at risk: 534 patients and 270 nurses in 17 wards, and 14 kitchen staff, involving the examination of over 1,200 faeces specimens. In addition, 43 environmental swabs were examined, one of which, taken from the walls of a kitchen toilet to which patients also had access, was positive for Salmonella livingstone.

The hospital pathologist and his assistants are to be commended for their painstaking and gigantic effort to control and confine this outbreak, the unusual feature of which was that there were only seven possible cases to 38 symptomless excreters. It suggests that the outbreak was so mild in character that symptoms passed unnoticed, and possibly there was some environmental spread of infection.

In addition, 41 cases of suspicious illness in 24 incidents, and four contacts of food poisoning cases occurring in other areas, were investigated. No food poisoning organisms were found.

Unsound food

Three hundred and sixty-five visits were made to the premises of wholesalers and retailers for the voluntary surrender of unsound and unsaleable foods, many of which were due to the breakdown of refrigeration storage and display units. This necessitated the issuing of 973 certificates of unfitness after the foodstuffs had been destroyed by incineration.

The amounts of foods surrendered and destroyed were:—

	tons	cwts.	qtrs.
Canned meat and fish	6	6	2
Fresh meat	0	18	0
Frozen foods	7	2	1
Miscellaneous canned goods	7	11	3
Other foods	11	19	1
	33	17	3

The Imported Food Regulations, 1968

The number of unexamined containers of foodstuffs, other than fresh meat and vegetables, received into the City during the year was 137. The containers, which held a variety of foodstuffs, are summarised below.

The contents of all the containers were examined and all new varieties and brands were submitted for examination and were found to be satisfactory, with the exception of four containers of tomato juice which were dealt with as follows:—

Because of difficulties experienced with the importers last year in respect of two containers of this product which had a very high mould count, formal samples were taken from each of four containers of tomato juice which were all from the same batch, and a six day detention order was served for each container.

Examination by the Howard Mould Count test demonstrated that 10 of the 13 samples taken were well above the accepted limit of 25 per cent positive fields, and the average for the 13 samples was 43 per cent positive fields. As the importers, without having their parts of the samples examined, refused to accept the Public Analyst's findings, the tomato juice was seized as being unfit for human consumption, two cases being removed as a token seizure. Delaying tactics by the importers caused the laying of evidence before a magistrate to be adjourned on two occasions, but eventually, without any rebutting evidence being offered, the magistrate made an Order to destroy or dispose of the tomato juice to prevent it being used for human consumption. At the making of the Order, it was agreed by both parties that the juice would be disposed of by re-exporting to the country of origin and this was later carried out.

Commodity	No. of containers	Commodity	No. of containers
Apples	8	Mandarin segments	4
Apple slices	1	Mexicorn	5
Apricot pulp	2	Mixed vegetables	2
Asparagus	3	Niblets	6
Beans	1	Onions	2
Biscuits	3	Oranges	1
Brussels sprouts	1	Orange juice	8
Carrots	1	Pears	1
Corn	4	Peas	3
Dehydrated onion	7	Premier jus	1
Frozen beans	1	Raisins	1
Fruit cocktail	1	Rice	6
Fruit salad	2	Salmon	4
Garlic	1	Spanish canned fruit	1
Grain flour	4	Sultanas	1
Grapefruit	30	Tomatoes	4
Lemons	1	Tomato juice	5
Lemon juice	1	Wheat germ meal	4
Macedoine	3	Wheat gluten	2
		Wip treme	1

Liquid Egg (Pasteurisation) Regulations, 1963

Visits to bakeries in various parts of the City were made for the purpose of sampling liquid pasteurised egg from various producers. The samples were submitted to the Public Health Laboratory for examination by the alpha-amylase test prescribed in the Regulations. All samples satisfied the test.

Milk and ice cream control

In the supervision of the processing and distribution of milk, the regular inspection of dairies, equipment and methods were maintained, together with the sampling of milk for bacteriological and biological examination, and for statutory tests. Similar measures were taken in respect of the manufacture and sale of ice cream. Seven hundred and forty-eight visits were made in connection with these duties to milk and ice cream dairies and distributing points.

Dairies

The regular visits made to dairies and depots in the City revealed that the hygiene standards were being satisfactorily maintained.

In addition to inspections carried out at dairies, for checking the processing plants and the sampling of milk to ensure the plants were working efficiently, the random sampling of processed milk from dairies, shops and vehicles was carried out.

Five hundred and twenty-eight samples were obtained for submission for the prescribed tests and, of these, 32 failed the methylene blue reduction test. Many of these were the result of shopkeepers selling milk 24 hours after delivery. The shopkeepers concerned were cautioned and repeat samples were satisfactory. After the methylene blue failures of pasteurised milk taken from vehicles in January, repeat samples were taken from several delivery points and six pasteurised milks failed the methylene blue reduction test. Investigations at the dairy revealed that large quantities of milk were being received at weekends which was surplus to requirements, because no cream or yoghurt was being produced, and this surplus was being carried over from day to day and sometimes two days. Advice was given on rotation of stock and cleaning of tanks, and no further failures were reported. No failures of the turbidity test and the Colony count test were reported.

Prescribed tests of processed milk

Type of milk and test	No. of samples examined	Satisfactory		Unsatisfactory	
		No.	Percentage	No.	Percentage
Pasteurised					
Phosphatase	269	269	100·0	—	—
Methylene blue	269	241	89·6	28	10·4
Pasteurised (C.I.)					
Phosphatase	69	69	100·0	—	—
Methylene blue	69	67	97·1	2	2·9
Pasteurised (Homogenised)					
Phosphatase	47	47	100·0	—	—
Methylene blue	47	45	95·7	2	4·3
Sterilised					
Turbidity	128	128	100·0	—	—
Ultra heat treatment					
Colony count	15	15	100·0	—	—
Totals	913	881	96·5	32	3·5

Brucella abortus

The sampling of untreated milk continued when 15 samples of bottled untreated milk were submitted to the Public Health Laboratory for examination by the milk ring test and, if necessary, on "culture examination". No positive results were reported.

Langho Colony

Visits were continued to the Colony farm and the kitchen, where samples of milk produced on the farm and pasteurised milk supplied by a processing dairy were obtained for examination by the methylene blue and/or phosphatase tests. All samples passed the statutory tests with the exception of one pasteurised milk which failed the methylene blue reduction test.

The high standard of milk produced on the farm was maintained, the average analysis being, total solids 12·77%, non fatty-solids 8·78%, and fat 3·99%.

Food and drugs

Two thousand three hundred and eight samples of food and drugs were submitted to the Public Analyst for examination and, of these, 626 were milk samples collected from farms, dairies, distributing depots, shops, institutions and delivery vehicles.

Two formal samples of Channel Islands milk from a farm supply were found to be deficient in fat to the extent of 25 per cent and 4 per cent, and legal proceedings were instituted resulting in the farmer being fined £20 with £5 costs. Added water in amounts varying from a trace to 4½ per cent was reported in 33 samples of milk, mainly in the first quarter when non-fatty solids are normally low, and the Hortvet freezing point test is applied to samples which are found to be below the presumptive standard of 8·5 per cent non-fatty solids. Investigations and plant tests at the dairies concerned were carried out and samples from tankers and farm supplies were examined in endeavours to trace the source of the added water. In most cases repeat samples were satisfactory and the dairies and farmers were cautioned. In two cases, legal proceedings against a dairy and a farmer resulted in fines totalling £30 with £22·50 costs, and legal proceedings are pending against another farmer. In addition, three bottles of milk which complied with the legal standards contravened the labelling regulations. In two cases the stamping die was defective and was replaced, and the third was an isolated case due to a "foreign" bottle being filled.

One hundred and thirty-one milk samples with non-fatty solid figures below 8·5 per cent (the presumptive minimum prescribed by the Sale of Milk Regulations) were adjudged genuine by the Hortvet freezing point test.

Other food and drug samples obtained and submitted for examination numbered 1,682, of which 84 contravened the various regulations and codes of practice. These were dealt with as follows:—

Forty-seven of these samples involving 25 different commodities were compositionally satisfactory, but contravened the Labelling of Food Regulations, 1970 which came into operation on 1st January, 1973. Investigations revealed that the majority of these samples were old stock which did comply with the previous regulations, and on new stocks the labels had been or were being amended to comply with the 1970 Regulations. In three cases the products were no longer being manufactured, and in two cases the entire stocks were withdrawn for relabelling. The labelling on nine packets of soup was the subject of correspondence with the Ministry and as a result of which no action was taken.

Ten formal samples of tomato juice had excessive mould counts when subjected to the Howard Mould Count test, and this resulted in the whole consignment being re-exported to the country of origin (see report under the Imported Food Regulations, 1968).

An informal sample of minced meat was found to contain preservatives contrary to the Preservatives in Food Regulations, but the butcher refused to sell further samples and was prosecuted for obstruction and fined £10 with £5 costs. Formal samples of rum and brandy contained 41 per cent and 28 per cent of added water, respectively, and were the subject of legal proceedings against a licensee who was given an absolute discharge with £25 costs on the two summonses.

An informal sample of canned stewed steak was found to be deficient in meat, but repeat samples were satisfactory. A deficiency of meat in a beef spread resulted in the entire stock being withdrawn and a repeat sample of later production was satisfactory. Five samples of sausages were found to contain preservatives which, although within the legal limits, were not declared, with the result that the butchers concerned were cautioned and appropriate notices were obtained and displayed with the sausgaes. One of these sausages was also deficient in meat content; the manufacturer was cautioned and repeat samples were satisfactory. Another sample of sausage was found to contain excessive preservative due to insufficient mixing of the ingredients. The manufacturer was cautioned and repeat samples complied with the legal standard.

Four samples of drugs were unsatisfactory:—

Excessive moisture loss in a packet of borax was part of some old stock bought by a previous owner of the shop. The remainder of the stock was withdrawn. An ether soap solution had excessive alkalinity and this proved to be the last of some old stock. Double the stipulated strength was reported in a phenol gargle sample and the remaining stock was destroyed. Although a sample of calcium lactate tablets was chemically correct, the weight of individual tablets varied beyond the limits laid down and the whole of the batch was withdrawn from sale.

Tin in excess of 250 ppm. (code of practice standard) was found in a sample and a repeat sample of tinned prunes, resulting in the remainder of the stock being surrendered for destruction. Excessive tin was also found in canned grapefruit juice and canned orange juice and, in these cases, the remaining stocks were withdrawn from sale. Lead in excess of the standard laid down by the Lead in Food Regulations, 1961 was found in a tin of sardines. Repeat samples were only marginally below the limit. The importer was cautioned and will investigate in the country of origin.

Two tins of fruit, strawberries and pineapples, contained syrup of incorrect strength. The standards laid down for fruit syrups are not legal requirements, but are contained in a code of practice promulgated by the Fruit Canners Association. In both cases the canners were written.

A canned milk pudding was deficient in milk fat content, but in repeat samples the fat content was adequate. A canned custard contained a foreign body which proved to be a piece of sealing compound used in capping. The canners were cautioned.

Two samples of lettuce contained excessive pesticides and the information was communicated to the local authority in which the lettuce were grown.

Five hundred and eighty-two complaints were received from private purchasers of food and drugs with regard to quality or the presence of foreign bodies. Investigations and enquiries were instituted at shops, wholesalers' and manufacturers' premises in efforts to find the breaks in food hygiene practices and procedures responsible for the complaints, and to eliminate the occurrence of similar incidents.

Legal proceedings were instituted in 8 cases as follows: a mouldy sliced loaf, two portions of fish and chips, each containing a wood louse, an unsound meat and potato pie, cheese containing a fly, South American oranges sold as Jaffas, a loaf containing an adhesive plaster dressing, broken glass in a jar of mint sauce. Fines and costs amounted to £173·00.

The samples of food and drugs which failed to meet the requirements of the Food and Drugs Act, Regulations or Orders, are summarised in the following tabular statement:—

Samples reported as adulterated or unsatisfactory and action taken

Private and informal samples					Legal proceedings							Formal samples				
Adulterated or unsatisfactory	No further stock available	Further samples obtained	Stock withdrawn	Cautions	Summonses	Number of samples	Number of convictions	Number dismissed	Amount of fines	Costs	Article	Adulterated or unsatisfactory	Further samples obtained	Stock withdrawn	Cautions	Number of samples
158*		27		3	4	5	3		£50	£27·50	Milk	8			3	8
1		1	1								Beef spread					
1			1								Borax					
					1	1	1			£12·50	Brandy	1				1
2					2	2	2		£40	£5	Bread					
1			1								Calcium lactate tablets					
1				1							Canned custard					
2			2								Canned fruit juice					
1				1							Canned milk pudding					
2			1								Canned prunes					
1				1							Canned pineapples					
1		1		1							Canned sardines					
1		1									Canned stewed steak					
1				1							Canned strawberries					
											Canned tomato juice	10		1		10
1					1	1	1		£20	£10	Cheese					
1	1										Ether soap					
2					4	2	4		£20	£8	Fish and chips					
2				1							Lettuce					
1					1	1	1		£20	£10	Meat and potato pie					
1					1	1	1		£10	£5	Minced beef					
1					1	1	1			£10	Mint sauce					
1					1	1	1		£25	£5	Oranges					
1			1								Phenol gargle					
					1	1	1			£12·50	Rum	1				1
6		1		5							Sausages					

In addition, there were 48 labelling irregularities involving 26 different foods.

*Includes 131 samples adjudged genuine by the Hortvet freezing point test.

Hospital kitchens

A major new activity in food hygiene began during the year. The department has found good relations with the catering departments of several hospitals in the City but following the recommendation of the Secretary of State for the Social Services (Circ. 31/73) the Medical Officer of Health drew the attentention of the hospital authorities to the suggestion of the Minister that local authorities should be invited to advise on catering hygiene. Accordingly, at the invitation of the various institutions the department has started this work. An inspector with special interest in food hygiene and health education has been seconded to the work initially and is carrying out in depth surveys of facilities, procedure and priorities. The subsequent reports are framed to emphasise practices which need to be changed and deficiencies in premises and equipment which need to be rectified. The hospital authorities are using these reports objectively and the department is responding similarly. This form of co-operation is the type of relationship between local authority and the N.H.S. which must be developed after re-organisation.

A total of seven institutions await inspection and the work proceeds as quickly as possible. The following hospitals have so far been dealt with:—

Wythenshawe and North Cheshire H.M.C.

Wythenshawe General Hospital, including Wythenshawe Maternity Hospital (new).
Wythenshawe General Hospital (old).
Baguley Hospital.

North East Manchester H.M.C.

Ancoats Hospital
Beech Mount Maternity Home
Crumpsall Hospital (including Delaunays geriatric unit)
Manchester Victoria Memorial Jewish Hospital
Northern Hospital
Springfield Hospital

Booth Hall Monsall H.M.C.

Booth Hall Hospital
Monsall Hospital

University Hospitals of South Manchester H.M.C.

Burton House geriatric unit
Christie Hospital
Duchess of York Hospital, Burnage, (including Rodney House)
Ear Hospital
Withington Hospital, including Withington Maternity Hospital

United Manchester Hospitals

Manchester Royal Infirmary

Waste food

An outbreak of swine Vesicular disease in the Manchester area affected the premises of a contractor engaged in the collection of food waste from a large number of schools in the southern area of the City, and the suspension of the collection necessitated speedy alternative means of collection and disposal, which was arranged with the Cleansing Department. Arrangements for the disinfection of the containers, which belonged to the contractor, from the infected area were supervised by the department.

Clean Air

Implementation of the smoke control area programme and other control measures has been notably effective. Three-quarters of the area of the City is subject to smoke control orders; since 1959 the winter daily averages for smoke have been reduced by 78·9 per cent and for sulphur dioxide by 53·3 per cent. Sunshine in the city centre has increased by 37 per cent and there has been a striking improvement in visibility. The downward trend in air pollution has been maintained.

Reorganisation of local authorities comes into operation in April, 1974. This is the last Annual Report under the existing arrangements and the opportunity has been taken to indicate what has been achieved so far and the outstanding problems likely to exercise the new authority in the next few years.

Control of air pollution in Manchester

1. Historical

Manchester is the centre of a region and the commercial heart of one of the most important industrial conurbations in the world. There has been some form of smoke control in the city for over 170 years and because powers to control the nuisance were sought early it has been called ''The Home of Smoke Abatement''. (1)

As early as 1800, the Commissioners of Police, at that time the effective local authority, created a committee to attend to and report all nuisances. This committee reported ''that the increase of steam engines as well as smoke issuing from chimnies used over stoves, foundries, dressers, dyehouses and bakehouses has become a great nuisance to the town unless so constructed so as to burn the smoke arising from them which might be done at moderate expense''. (2) As early as this, it was recognised that industrial smoke could be greatly diminished.

When the Manchester Board of Health was reorganised in 1832, Dr. James Kay and his colleagues investigated local conditions, and Kay, of atmospheric pollution, wrote, of part of Manchester, ''this district is surrounded on every side by some of the largest factories of the town whose chimneys vomit forth dense clouds of smoke which hang over this insalubrious region''. (3)

With the reform of local government by the passing of the Municipal Corporations Act, 1835, and the subsequent incorporation of Manchester as a borough, the powers of the Police Commissioners were transferred to the Borough Council, in 1842, as far as the original township of Manchester was concerned. Prior to this date the Police Commissioners had annually appointed a nuisance committee, which not only had to appoint nuisance inspectors and suppress the various nuisances prohibited by the Police Acts but also had to carry out Police regulations relating to the height of chimneys and preventing nuisances arising from smoke, and also ''to take any steps which may be necessary for compelling owners and occupiers of steam engines and fire engines to construct the fireplaces and chimneys thereof respectively in such a manner as most effectively to destroy and consume the smoke arising therefrom''. (4)

In 1843, this committee was replaced by a nuisance committee for the whole Borough and steps were taken to deal more energetically with smoke nuisances. (5) At the same time, the declining manorial Court Leet was in 1844 still taking action against factory owners for allowing ''large quantities of smoke and soot to issue from their factory chimneys''. (6)

In securing the establishment of effective local government, the Borough of Manchester pursued a policy of obtaining local Act powers to enable them to have more effective control over local conditions. Hence the Manchester Police Act 1844 included provisions to control smoke nuisances and, in advance of national legislation, a requirement to the effect that every furnace used for the purposes of trade or manufacture should be so constructed as to consume its own smoke. (7)

In 1846, the Chief Constable declared that the town was much freer of smoke than formerly, and the following year, 1847, the nuisance committee appointed a special inspector for the suppression of smoke nuisance.

The Industrial Revolution was a period of unprecedented industrial expansion in Manchester. Air pollution was a serious problem in the city and, despite the efforts which were made, numerous contemporary records describe the grime, soot and filth resulting from such smoky conditions. (8)

As long ago as 1848, in spite of what the Chief Constable had said and what the special smoke inspector had achieved, Manchester had the doubtful distinction of being the first place where the dark melanic "carbonaria" form of the peppered moth was taken, indicating that the trees were already so dirty that the typical light coloured moth had become conspicuous against the blackened background and, an easy prey for birds, was being exterminated from urban areas. (9)

In 1850, the Superintendent of the Nuisance Department reported that in the preceding year the smoke inspector had taken observation of 510 chimneys and cautioned 231 mill owners, had served 87 notices requiring the improvement of furnaces and 16 owners had been fined. (10)

The work of smoke abatement continued, although progress was comparatively slow, and even by the end of the century administrative difficulties were being met, for in 1899 A. T. Rooke, the Superintendent of the Sanitary Department, reported that "friendly magistrates" sometimes prevented a conviction in smoke abatement cases. (11)

Manchester was not, of course, alone in finding it difficult to make progress in securing a cleaner atmosphere but at least the Corporation persisted in its efforts. Even during the first world war, when shortage of money and limited manpower brought many projects to a halt, it is recorded that research on smoke abatement continued as the research required little immediate capital investment but would be productive of much future good.

Although there has been some form of smoke control activity in the city for over 125 years, and because powers to control the nuisance were sought early Manchester has been called "The Home of Smoke Abatement", Manchester has been distinguished in the fight for a cleaner atmosphere, not only by the work done by the local authority and its officers but because of the interest, germinal ideas and vigorous activity by many of its citizens.

Although the Coal Smoke Abatement Society was formed in London in 1899, there had also been a Noxious Vapours Abatement Association in Manchester in the latter part of the nineteenth century. In 1909, a smoke abatement society existed in Manchester and took part in a conference in Sheffield with similar bodies from Glasgow and Sheffield. Out of this conference there was established the Smoke Abatement League of Great Britain which had its headquarters in Manchester; its Honorary Secretary was E. D. Simon (later Lord Simon), a Manchester business man and philanthropist, whilst prominent amongst its active members were J. W. Graham of Manchester University and Will Melland of the Manchester City Council.

In the Diamond Jubilee Handbook of the National Society for Clean Air is written "The first world war halted progressive smoke abatement, and it was not until some years after the war that it began, in a popular way, to move forward again. The Coal Smoke Abatement Society in London and the League in Manchester concentrated their efforts in supplying evidence to the revived Government Committee under Lord Newton and then on seeking to strengthen (in the face of much opposition from industry) the Bill which was eventually, in 1926, to find its way to the Statute Book as the Public Health (Smoke Abatement) Act. Apart from this, the centre of activity moved from London to Manchester, where a revived League organised exhibitions and conferences". (12)

In 1928, the Manchester-based Smoke Abatement League engaged a full-time Secretary, and in 1929 the Smoke Abatement League of Great Britain and the Coal Smoke Abatement Society amalgamated to form the National Smoke Abatement Society with headquarters in Manchester.

In 1934, the chairmanship of this Society was taken (and held until 1950) by Mr. Charles Gandy, a Manchester barrister, who made an outstanding contribution to the cause of clean air by his concept of the "smokeless zone".

2. Smokeless Zones

In 1938, the National Smoke Abatement Society (whose headquarters were still in Manchester) acting on this idea conceived by Mr. Gandy, made representations to the City Council suggesting the establishment of a smokeless zone in the city. This idea was accepted by the City Council but could not be implemented quickly as the second world war intervened. Nevertheless, in 1946, Manchester was the first local authority in this country to obtain powers, under the Manchester Corporation Act, 1946, to establish "smokeless zones". The Act also included provisions relating to the "prior approval" of new furnaces.

Due to post-war difficulties in the supply of fuels and equipment, implementation was delayed, and the first smokeless zone in the city came into operation on 1st May, 1952. It was 104 acres in area, contained about 1,100 separate premises of the commercial multi-storey type, and accommodated a large day-time population. There was whole-hearted co-operation from the owners and occupiers of premises, and during the autumn of 1952 the obvious success of the scheme gave rise to public demand for the area to be extended. Three similar contiguous areas were added, and the central zone now covers 412 acres of the city centre. Ten further smokeless zones were established under the local powers before the Clean Air Act, 1956, came into operation. They were located in clearance areas about to be redeveloped and were a logical correlation of the clearance of unfit houses with a clean air policy. They were, however, rather small and too scattered to make any significant difference to local pollution.

3. Smoke Control Areas (Soft Coke)

Following the London Smog of 1952, a Committee on Air Pollution was appointed under the chairmanship of Sir Hugh Beaver "to examine the nature, causes and effects of air pollution and the efficacy of present preventive measures; to consider what further preventive measures are practicable; and to make recommendations". The Committee published an Interim Report, Cmd.9011 in November, 1953; and a Report, Cmd.9322 in November, 1954; and in July, 1956, the Clean Air Act, 1956, was made by Parliament.

The Act includes provisions dealing with the establishment of Smoke Control Areas, including grant provisions that enabled the altering of domestic grates to be tackled on a scale that was not possible before, making the inclusion of large areas of housing a practicable proposition.

The opportunity was welcomed by the City Council and they decided to establish smoke control areas covering most of the city, excluding unfit houses which would be demolished following parallel action under the Housing Acts.

To obtain experience in the use of the new powers, before attempting larger areas, a pilot scheme was undertaken in an area of about 50 acres which was being redeveloped after the clearance of unfit houses. Approximately 200 dwellings of different ages, types and sizes, were to remain after the clearance and they provided a good introduction to the problems likely to be encountered.

The general plan in establishing the smoke control areas was to start at the southern city boundary and work northwards, ''with the wind'', to obtain the maximum cumulative benefit.

The first major areas of 3,390 acres (5·3 square miles) contained about 18,000 houses and 400 other premises. Three industrial estates were included, with a variety of fuel-burning plants in the factories; and there were a number of market gardens on the semi-rural fringe, which introduced an interesting diversion into the subject of soil sterilization by heat.

Sixteen thousand of the dwellings were in municipal housing estates owned by the Corporation. They comprised about forty different types of houses, flats and maisonettes, but because of the relatively few different types of existing appliances which had been installed, the initial survey was restricted to a sample of 1·40. Subsequently, to obtain information about appliances installed by tenants, it proved necessary to supplement the sample by a postal survey.

Every privately owned dwelling was visited and surveyed and this, in addition to providing accurate information about the existing appliances, was a good exercise in public relations. It was reassuring to find that the vast majority of residents were in agreement with the proposals, and that little opposition to the changes was likely to arise.

The statutory formalities provide that any person who will be affected may, by notice in writing to the Minister, object to the confirmation of the smoke control order and, in the event of the objections not being withdrawn, provide for the holding of a Public Inquiry into the proposals.

In the first major area there were 420 objectors (representing 2½ per cent of the householders) whose objections had been canvassed by a coal merchant opposed to the scheme. A Public Inquiry was held in 1960 and the smoke control order was subsequently confirmed without modification. Other than this, there had been no organised opposition, and apart from one further Inquiry in 1966, to resolve an objection lodged by a single individual, no other Inquiries have been necessary.

The clearance of unfit houses, and the policy of making the cleared areas subject to smoke control orders, has continued. During the city's growth, several smaller townships were incorporated, so that the areas of worst housing are scattered. For clearance, these areas are dealt with on the broad principal of "worst first", and the subsequent smoke control areas form pieces of a gradually growing jigsaw north of the general line of advance of the larger smoke control areas.

4. Smoke Control Areas (Hard Coke)

In December 1963, the publication of the Minister of Power's review of the availability of different smokeless fuels "Cmd.2231 Domestic Fuel Supplies and the Clean Air Policy", and the subsequent circular No. 69/63 from the Minister of Housing and Local Government, produced some major changes in grant arrangements. Whilst adequate supplies of gas coke (soft coke) would continue to be available to supply the demand for solid smokeless fuel in the smoke control areas already established, technological changes in the gas industry were making the production of gas by the carbonisation of coal uneconomic, and further supplies of gas coke for new smoke control areas would not be available. Accordingly, future smoke control areas would need to be based on the use of other smokeless fuels, namely hard coke (Sunbrite), premium low temperature carbonisation solid smokeless fuels (such as Coalite, Rexco and Phimax), gas, off peak electricity, and oil: the grant system was extended to permit grant to secure the generally more expensive conversions involved.

The change in policy temporarily disrupted the progress that had been planned and increased the cost of establishing an area by two and a half to five times what it was under the previous arrangements. It did, however, have compensating advantages. The appliances towards which grant became available are much more efficient and permit higher heating standards, better utilization of fuel and correspondingly reduced air pollution.

At the present time (December 1973) approximately 77 per cent of the total area of the city, and 60 per cent of the total premises are subject to smoke control orders. Allowing for unfit dwellings, which are to be demolished, roughly three-quarters of the smoke control area programme for dwellings is completed.

Since 1959, the winter daily averages for smoke have been reduced by 78·89 per cent, and those for sulphur dioxide by 53·28 per cent; there has been a striking improvement in visibility and winter sunshine in the city centre during 1961-70 was 37 per cent higher than during 1931-57.

Thus the objective—to reduce total smoke in heavily populated areas by something of the order of 80 per cent—has nearly been attained and should be surpassed as the rest of the smoke control area programme is implemented. The present programme requires the last order to be made in mid-1976, orders to cover the rest of the city are being made as far as the work can be accomplished, and if the present rate can be maintained the programme should be completed on time.

5. Progress to the present time

The establishment of smokeless zones in the city centre in 1952 and 1955 effected a substantial reduction in the amount of smoke emitted there, but, as measurements with the daily volumetric apparatus did not commence there until 1959, objective quantitative confirmation of the amount of reduction is not available. Nevertheless, there is ample subjective evidence—in the form of newspaper reports and personal recollections about "pea-soupers" and "smogs"—that the reduction was spectacular. At that time the exponents of clean air were ploughing a lonely furrow and were—in general—regarded as eccentrics. The importance of their contribution is appreciated.

Since 1956, progress has been facilitated by the improved control provisions available under the Clean Air Acts, notably by the smoke control area provisions, and very considerable further improvement has been effected. The appended block graph and table illustrate the reductions in the winter daily averages of smoke and sulphur dioxide since 1959. Overall, smoke in Manchester has been reduced by about four-fifths and sulphur dioxide by more than a half. ''Smog'' conditions have occurred twice in the last ten years, in 1962 and 1967, and the levels in 1967 were about half those recorded in 1962. It is most unlikely that incidents such as that on 4th May, 1950—when the city was blacked out by ''smog'' at ten o'clock in the morning—will ever recur.

Despite the remarkable improvements which have been achieved, air pollution remains a serious social evil and needs to be further reduced. The North West Region has by far the highest population density (850 persons per square kilometre) of any region except London and by far the highest domestic coal consumption. To put the North West in perspective with some of the less-polluted regions, it is probably sufficient to say that for the two winters of 1968-70 *country* smoke and sulphur dioxide concentrations for the Region were above the average *town* concentrations for East Anglia, South-West, South-East and South Wales. The highest concentrations currently recorded in the Region are in the Manchester Group (i.e. the South East Lancashire conurbation—with a population of the order of 2·5 millions contained within an area of some 1,000 square kilometres).

The Department of the Environment has stated that sulphur dioxide concentrations of 500 ug/m^3 or over associated with 250 ug/m^3 or more of particulate matter (mainly derived from coal smoke) is the lowest degree of pollution which has been identified as having an effect on the human body. The daily averages conceal peaks, and adopting the reasonable assumption that a 24 hour average of sulphur dioxide of 250 ug/m^3 is likely to conceal a peak of 500 ug/m^3, a day on which both smoke and sulphur dioxide exceed 250 ug/m^3 can be regarded as a ''hazardous day''. The appended table shows the number of such ''hazardous days'' in Manchester during the winters of 1971-72 and 1972-73. These results, whilst providing a further illustration of the effectiveness of smoke control areas, also indicate that the control of air pollution must remain a top priority if ''hazardous days'' are to be eliminated.

6. Unresolved pollution problems

There is no shortage of future tasks to exercise the new organisation.

The first priority is to complete the smoke control area programme. Looking back at the programme shows that the progress has been accomplished by sustained effort interrupted by changes in the patterns of availability and use of fuels. There is no doubt that the current ''Energy Crisis'' will cause convulsive confusions and entail further readjustments to new and still changing constraints, and that it may well cause a temporary setback similar to those which have occurred in the past. Difficulties with the availability of smokeless open fire fuels have already arisen.

The energy crisis began to affect fuel choice before the Arab Oil Producing Countries announced their decisions to reduce oil exports and increase oil prices. The present situation, short-term, is unfavourable. Oil imports are down by about 15 per cent and at the end of the year supplies of many oil products, including petrol, were already at danger level; and the price of oil had doubled in the last few weeks. Coal production was reduced by the miners' overtime ban, and the distribution of coal and electricity is adversely affected by industrial disputes. Limited choice and variations in fuel quality can only make proper combustion harder to achieve and consequently increase the risk of more air pollution being emitted.

The crisis is not an unmitigated tragedy. At least it has taught everyone to be more thoughtful about the resources, human and material, on which they rely; and longer-term the situation is not without some compensating advantages. Energy has become more expensive and will stay expensive, higher fuel costs will necessitate more efficient use of less fuel and therefore reduce air pollution. However, until North Sea oil becomes available in about three years the use of our indigenous fuel, coal, in smaller industrial plants is likely to increase; and, as smokeless combustion is more difficult to achieve with coal than with oil, some unavoidable increase in industrial smoke emissions may occur.

In addition to the control of smoke the policy of the City Council has, since 1956, also been directed towards securing a reduction in emissions of oxides of sulphur into the atmosphere. Where oil is used for heating Corporation buildings its use is restricted to those grades with a sulphur content not exceeding 1 per cent. Private developers who propose oil are asked to follow the Corporation's example and whilst the extra fuel cost sometimes precludes the choice of a low sulphur content fuel for large steam-raising plant a fair measure of co-operation is secured. In general, the factors affecting a developer's decision whether or not to use a lower sulphur content fuel are price, availability of the amounts required—with a reasonable guarantee of continuity of supply, convenience, and public-spirit. Each case needs to be considered on its merits—and the variations are legion—but, because of increasing costs, it can be anticipated that co-operation with the City Council's policy will become even more difficult to secure in the future than it has been in the past.

The Protection of the Environment Bill, introduced into Parliament in November, will enable the Secretary of State to make Regulations controlling the sulphur content of oil fuel, and no doubt he will do so as soon as the time is opportune.

Last year's report listed the main air pollutants in an arbitrary descending order of significance and went into some detail about pollution from road vehicles. The order of those priorities, which remains unaltered, is:—

Domestic Smoke.
Low level smoke from the burning of waste materials in the open.
Industrial smoke.
Sulphur dioxide at breathing zone level (mainly from domestic chimneys).
Vehicle smoke and fumes.
Grit and dust.
Odours.
Toxic and other gases.

Control is a constant process of attrition by application of the appropriate remedy (if one exists); but, whilst the basic questions stay the same, technology, cost, and circumstances all alter, and the answers become different. Application of the "best practicable means" approach enables account to be taken of improvements in plant and operating techniques.

There is, obviously, no virtue in adopting complicated remedies for unnecessary problems, and where any proposed plant involves a high pollution potential a basic feature of control is to question the need for that particular plant or process; and to suggest alternatives. In this context the Energy Crisis, resulting in less petrol at a higher price, will promote a more sensible examination of the vehicle pollution problem and will undoubtedly make public transport more attractive, reduce the number of vehicles using the city centre, and result—eventually—in smaller vehicles using less fuel. These enforced changes of habit are likely to reduce vehicle pollution faster and more effectively than would otherwise have been the case. The cost in terms of traumatic experience, remains to be counted; but it is not without irony that the most effective action of the year against vehicle pollution in this country was taken by the Shah of Iran.

The effect of local government reorganisation will be to add to the area already administered. The additional area—to the south of the city—includes the airport (which for all practical purposes of pollution is already within the city's control) and a semi-rural area of farms and houses with no great pollution potential; so that reorganisation will not affect the existing problems very much. Neverthless, the work becomes progressively more technical and extends in scope and depth. More and more emphasis is placed on prevention being better than cure, on intelligent anticipation rather than reaction to what has already occurred; better methods of measurement need to be adopted now that the grosser parts of pollution have been eliminated but the basic requirements are still a well developed capacity for careful observation and an appreciation that pollution remains a serious social evil.

The acid test of the effectiveness of existing control measures is the reductions in air pollution which have already been achieved. These are set out in other parts of this report, and the existing authority can be proud—if not satisfied—with what has been accomplished.

The new authority will inherit a fine city with a good record of effective action against air pollution. It will find no shortage of pollution problems to serve as challenges and opportunities or to tax its resources.

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It has been a difficult year. In 1973 the work-load was greater than ever before and the resources were fully taxed; indeed in some respects over-taxed.

The number of visits to works was 5,156, and the number of visits to premises in smoke control areas was 61,814, (compared with 3,916 and 24,848 visits, respectively, in 1972). Incoming correspondence increased from 1,926 in 1972 to 9,061 in 1973, mainly due to the accelerated smoke control area programme. Other aspects of the work have also increased in volume and complexity.

The following tables detail the number of contraventions reported to the Health Committee and of timed observations recording smoke emissions.

Cause of Emission	Action taken		Totals
	Caution	Prosecution	
Contravention of Section 1. Clean Air Act, 1956.			
Emission of dark smoke from a chimney	1		1
Contraventions of Section 1. Clean Air Act, 1968.			
Burning of miscellaneous solid wastes on land	11	17	28
Contraventions of Section 9. Clean Air Act, 1968.			
Sale of unauthorised fuel in smoke control areas.	1	9	10
Totals	13	26	39

Twenty-eight cases came to court (including 6 from late 1972) and four cases have still to be heard. Convictions were secured in 27 cases and one case (against a coalman) was dismissed on grounds of doubt about the identity of the seller concerned. Penalties totalled £485 in fines with £118 costs imposed.

Legal proceedings are not instituted lightly and the outcome of some cases is regarded by this department as unsatisfactory. In general the fines imposed were derisorily low (usually a great deal less than it would have cost the offender to avoid the contravention) and consequently provided no real deterrent to the indiscriminate burning of waste.

For example:—in one instance a firm of demolition contractors (with two previous convictions) was fined £10, £15 and £25 in respect of three separate gross offences which happened to be heard on the same day.

By pleading ''Guilty'' the firm avoided the seriousness of the cases being brought to the attention of the Court, and the defence pleas of mitigation included a number of important inaccuracies which went unchallenged; although costs were asked for none were granted.

Some indication of the seriousness of this kind of contravention is provided by the ''Protection of the Environment Bill, Schedule 2'', now before Parliament, which seeks to increase the maximum penalty from £100 to £400.

Timed observations recording smoke emissions

	Number	Total amount of dark smoke in minutes
Infringements of the Clean Air Acts	29	539
Dark smoke but not infringing the Clean Air Acts . .	122	176
No dark smoke	100	—
Totals	251	715

Notification and prior approval of furnace installations

Proposals to install any new furnace with a heating capacity of more than 55,000 British Thermal units per hour must be notified to the local authority, so that the proposals can be assessed to ensure that the furnace is capable, so far as practicable, of being operated continuously without emitting smoke when burning fuel of a type for which the furnace was designed; and that the chimney is of sufficient height to prevent the emissions from becoming prejudicial to health or a nuisance.

Two hundred and seventy-four plans and specifications were received and examined and details of 78 furnace installations were submitted and approved in the year.

The type of fuel to be used in new furnaces, to which formal ''prior approval'' was granted, was as follows:—

Fuel	*Total installations*
Oil 26/35 seconds viscosity	43
Oil 3,500 seconds viscosity	3
Gas with 3,500 seconds oil as standby	1
Gas	31
Total	78

In addition, five new boiler plants were installed in the central smokeless zone, where the over-riding requirement, under Section 35 of the Manchester Corporation Act, 1946, is that no smoke shall be emitted from any premises and where, consequently, formal ''prior approval'' under the Clean Air Act is not appropriate. The fuels concerned were gas in four cases and 35 seconds oil in one case.

Proposals for the erection of 219 new chimneys were examined and approved under the provisions of the Clean Air Acts, and in a further 10 cases the proposed connection of new furnaces to existing chimneys was considered. Conditions limiting the rate and/or quality of emissions were attached to the approvals of chimney height as appropriate.

The ''prior approval'' of new furnaces and ''approval'' of chimney heights is an important aspect of control. It is customary to reach agreement with developers before proposals are submitted formally for approval and the process is, consequently, one of the more interesting and demanding facets of the work. The term ''furnace'' is not defined but may be taken to mean ''any space where combustion takes place''; and ''chimney'' is defined as ''any opening or structure through or from which smoke may be emitted''. Thus the scope of the exercise is wide and requires considerable expertise and flexibility for proper application of the function. In this context the ''best practicable means'' approach enables advantage to be taken of improvements in technology (so that the department has to keep abreast of changing parameters); and, whilst there are accepted engineering formulae for determining chimney height, the variations in locality and topography are numerous so that there is a considerable area for the exercise of good judgement, and the bare figures are a poor indicator of the amount of work involved and interest derived.

The scope of proposals covers a wide range (e.g. from a straightforward small boiler installation using gas to a steelworks complex costing £12,000,000 or an incinerator to dispose of 5,000,000 gallons of tar and water) and it is in the cases of the larger—more complex—proposals, with a high pollution potential, that the exercise of good judgement is most important. The relevant law is complex—indeed sometimes confused—and the department takes the view that it is entitled to express its view on any proposals which involve a risk of pollution whether or not the legislation—strictly applied—would authorise it to do so. This approach—intelligent appraisal of the risks rather than slavish application of the existing control powers—is a necessary factor in the conduct of the control measures. It has, for many years, been the practice of the Health Committee and the Planning Committee to ask disconcertingly direct questions such as "Is this process necessary?" or "Has any cost benefit analysis of the alternatives been carried out?" It makes life harder for the officers but it gets better results. This combination of apparent simplicity with actual subtlety works well with developers, and it may not be inappropriate—in this special report at the end of a stage in the process of reducing pollution—to say that the department is grateful for the prodding of the elected representatives and the co-operation of developers, and to opine that the respect is mutual.

Smoke Control Areas

The position at the end of the year was as follows:—

Item	Category	Acres	Total Premises	Dwellings	Not Dwellings
1	Number in valuation list at 1st April, 1973	27,255	212,108	174,706	37,402
2	14 Smokeless Zones made under the Manchester Corporation Act, 1946	523	4,764	2,623	2,141
3	9 Smoke Control Areas made on the "gas coke" basis	8,888	49,012	46,799	2,213
4	24 Smoke Control Areas made on the "hard coke" basis	9,528	58,464	53,156	5,308
5	Totals subject to OPERATIVE Smoke Control Areas	18,939	112,240	102,578	9,662
6	Percentage of Item 1 in "OPERATIVE" areas	69·5	52·9	58·7	25·8
7	3 Smoke Control Orders "MADE" not yet "OPERATIVE"	2,090	16,823	15,888	935
8	Percentage of Item 1 in orders "MADE" above	7·66	7·80	9·09	2·50
9	Totals in Items 5 and 7	21,029	129,063	118,466	10,597
10	Percentage of Item 1 in Items 6 and 8	77·16	60·70	67·79	28·30
11	Percentage still to be covered by orders	22·84	39·30	32·21	71·70
12	Numbers still to be covered by orders	6,226	83,045	56,240	26,805
13	3 Proposed Smoke Control Areas Survey completed	556	4,024	3,710	314
14	2 Proposed Smoke Control Areas Survey in progress .. approx.	800	5,000	—	—

The number of outstanding premises (Item 12) is an overstatement; allowing for new premises built in existing smoke control areas and for demolitions due under Clearance or Compulsory Purchase Orders, the actual number of premises involving changes of appliances still to be included in Smoke Control Orders is around 32,000.

During the year three Smoke Control Orders, accounting for 2,234 acres (3·49 square miles) and 16,053 premises, were brought into operation; one Smoke Control Order accounting for 788 acres (1·23 square miles) and 5,927 premises was confirmed; one Smoke Control Order accounting for 826 acres (1·29 square miles) and 5,794 premises was made and confirmed; and one Smoke Control Order accounting for 476 acres (0·74 square miles) and 5,864 premises was made and is awaiting confirmation.

The "Mount Road" Smoke Control Order (1·88 square miles and 11,935 premises) came into operation on 1st October, 1973, after confirmation in December 1972; thus requiring a very big area to be converted in about nine months. Early in the year the progress of conversions was delayed by a gas workers strike, which lasted for about six weeks and complicated both smoke control area conversions and conversions to natural gas; and conversions at Corporation dwellings were affected by "Improvement" proposals. The time allowed for conversions was short and these factors resulted in some work remaining to be completed after the operative date, some of which is still incomplete. Assessment of grants was affected by the introduction of Value Added Tax and the effects of inflation on costs. Circular 135/73 issued in October increased maximum cost limits for appliances and some NORWEB installation costs for electric appliances were increased in October. Estimates for one proposed smoke control area had to be revised to take account of increased costs, and showed an increase of about 7 per cent on the estimates made earlier in the year.

At the present time the establishment of smoke control areas is slightly ahead of the planned programme; approximately 77 per cent of the total area of the city, and 60 per cent of the total premises are subject to smoke control orders, and if the present rate can be maintained the programme should be completed on time; i.e. the last order should be made in mid-1976.

Recording of atmospheric pollution

Continuous measurement of smoke and sulphur dioxide by means of the daily volumetric apparatus was maintained at eight sites during the year. The sites are located approximately along the north-south axis of the city, and—because the measurements have been taken continuously over a number of years—the results are a reliable indicator of trends.

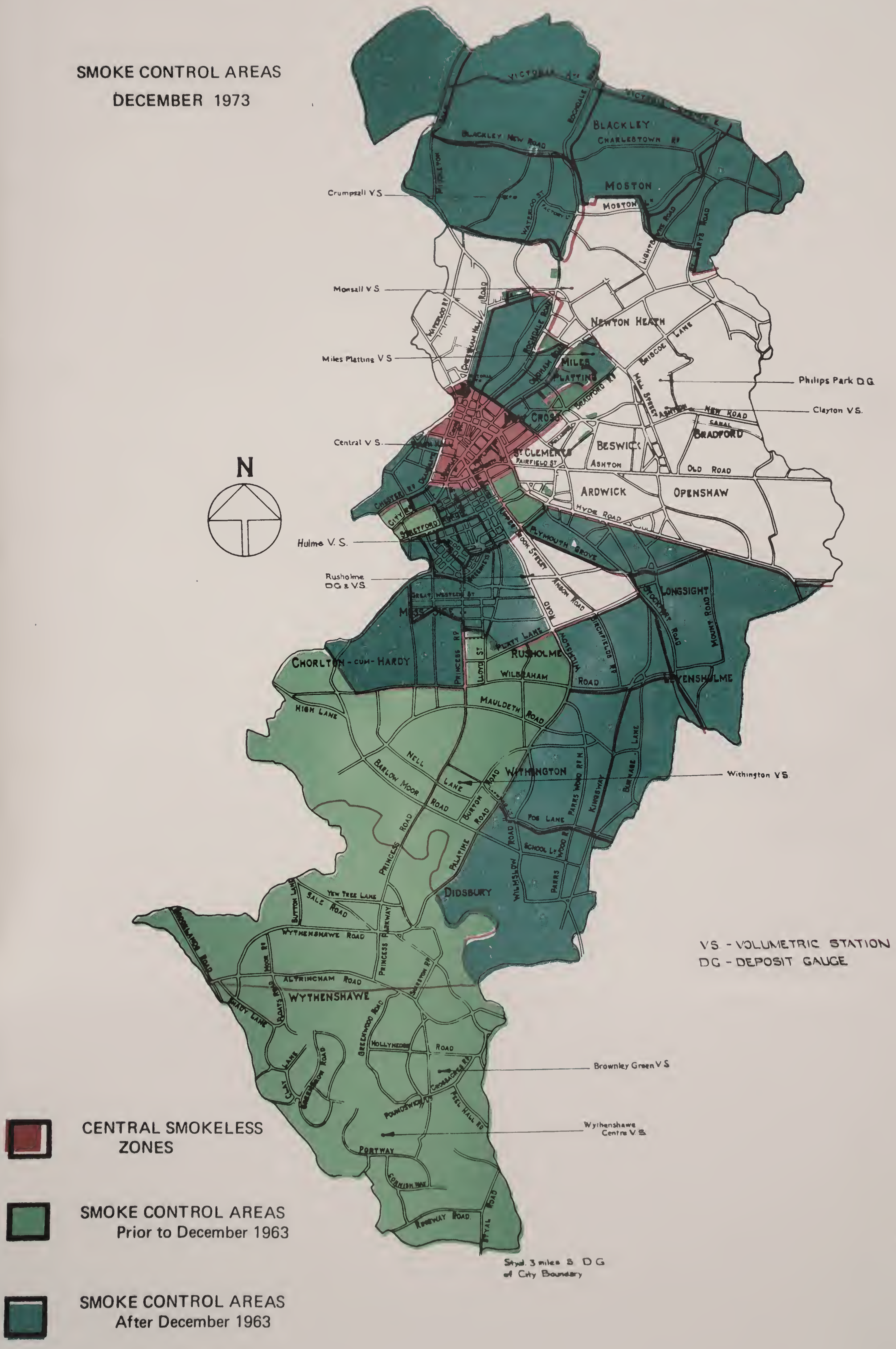
The vast improvement in air quality in the city in recent years is a matter of common observation, indeed if it were not so the control measures would have been proved ineffective; and the measurements are retained to quantify what is obvious, and to permit objective comparison between different parts of the city and with other places elsewhere.

Because the method of measurement is arbitrary and relatively insensitive (the results are in terms of 24 hour averages which conceal shorter-term "peaks") the results need to be applied with discretion if over-simplification is to be avoided; e.g. direct comparison of one site or one year with another can be misleading. The winter daily averages provide the most relevant indicator of trends and it is gratifying to be able to report that (in terms of overall winter daily averages) smoke in Manchester has been reduced by 78·9 per cent since 1959, and sulphur dioxide by 53·3 per cent.

The daily averages for 1960-73 and the winter daily averages for 1959-60 to 1972-73, for each measurement site, are shown in the appended tables and graphs.

CITY OF MANCHESTER

SMOKE CONTROL AREAS
DECEMBER 1973



🟥 CENTRAL SMOKELESS ZONES

🟩 SMOKE CONTROL AREAS
Prior to December 1963

🟦 SMOKE CONTROL AREAS
After December 1963

At the present time (on the basis of opinions about "acceptable levels" expressed by the Director of the Medical Research Council's Air Pollution Unit) the department has adopted "target levels" of 100 ug/m^3 as a winter daily average for smoke, and 150 ug/m^3 as a winter daily average for sulphur dioxide. On this basis, six of the eight measurement sites were better than "target level" for smoke and six worse than the "target level" for sulphur dioxide.

Another way of assessing the results—in terms of "hazardous days"—is described earlier in this Report and illustrated in an appended table. In evaluating that risk it needs to be borne in mind that the table reveals numbers of occasions on which "hazardous conditions" could have occurred; it does not necessarily follow that they did occur. Nevertheless, despite the considerable reductions in smoke and sulphur dioxide which the measurements confirm, there is a need for further reductions to be attained; and, as the grosser aspects are already largely eliminated, further improvement will become progressively more difficult.

It will be necessary to retain the daily volumetric sites until the smoke control area programme is completed and the full benefit demonstrated by the measurements. After that, it should be practicable to reduce the number of static measurement sites and to give increased attention to more sophisticated methods of measurement of other air pollutants.

Interesting botanical confirmation of improved air quality came to light during the development of a site (formerly a golf course) at Nuthurst Road in the north of the city, and within the "Moston" smoke control area; when over 2,500 rare orchids "dactylorchis purpurella" were found, together with types of mosses which are very sensitive to pollution and which do not usually do well in cities.

It will be recollected that a reversal of the trend towards melanism in Peppered Moths was reported in 1971.

Standard deposit gauges were maintained at Philips Park, Rusholme and Styal to measure deposited pollution (grit and dust) and the results show that the downward trend continues.

Standard Deposit Gauge 1973

(Grams per 100 square metres)

Monthly averages together with the average for the previous five years

	Stations					
	Philips Park		Rusholme		Styal	
	1973	Five yearly average	1973	Five yearly average	1973	Five yearly average
Rainfall	72	74	54	71	72	69
Insoluble matter	382	555	287	355	142	116
Soluble matter ..	234	330	193	260	154	182
Total solids ..	616	885	480	616	296	298

The Rusholme gauge was subject to interference in October—when the bowl was blocked by gravel—and the Rusholme 1973 figures represent an 11 month average.

Environmental Health Education

Thirty talks on "The Control of Air Pollution in Manchester" were given to various groups—totalling about 1,800 persons—during the year.

The level varied from junior students at a comprehensive school to post-graduate M.Sc. at the University and the content of the talk is adjusted to suit the audience. The department also contributed to a symposium on lead pollution held for the M.Sc. in pollution control at Manchester University.

The "schools" presentation comprises a 45 minute talk supported by slides and a question-time. Each inspector deals with the schools in his own area and the department's portable "Clean Air" exhibition is utilized where appropriate.

A most interesting and successful day was spent at Levenshulme High School at a "Pollution Conference" attended by about 1,100 pupils and teachers. The activities included talks on air, land and water pollution; a pollution quiz; a most effective "Pollution Play" presented by actors from the Contact Theatre Group; and an "Open Forum". The pupils had received tuition beforehand and their questions were remarkably well informed.

Foreign visitors from Australia, China, Hong Kong, Japan, Rumania, and South Africa were entertained in the department; notably the Chinese Trade Delegation which had expressed interest in the measurement and control of air pollution.

A new portable exhibition stand on "Pollution" was constructed to supplement the existing "Clean Air" exhibit.

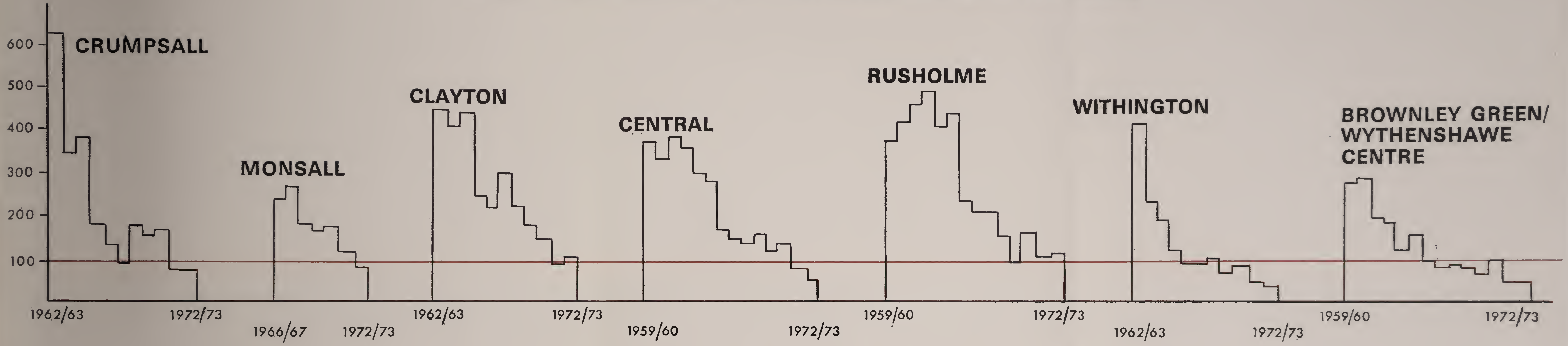
The Manchester and District Regional Clean Air Council, for which the department has provided secretarial services for a number of years, is to be superseded from 1st April, 1974, by a "Greater Manchester Council for Clean Air and Noise Control". The new Council will carry on the work of publicity and consultation on regional problems formerly carried out by the Regional Clean Air Council, together with the co-ordination of air pollution measurements and smoke control conversion costs which are at present functions of other local clean air committees.

During the year, in addition to its other functions, the Regional Clean Air Council organised a Conference of Clean Air and Noise Advisory Councils which was attended by representatives from eight regional councils from the North and Midlands areas and from the Corporation, whose Health Committee provided the hospitality.

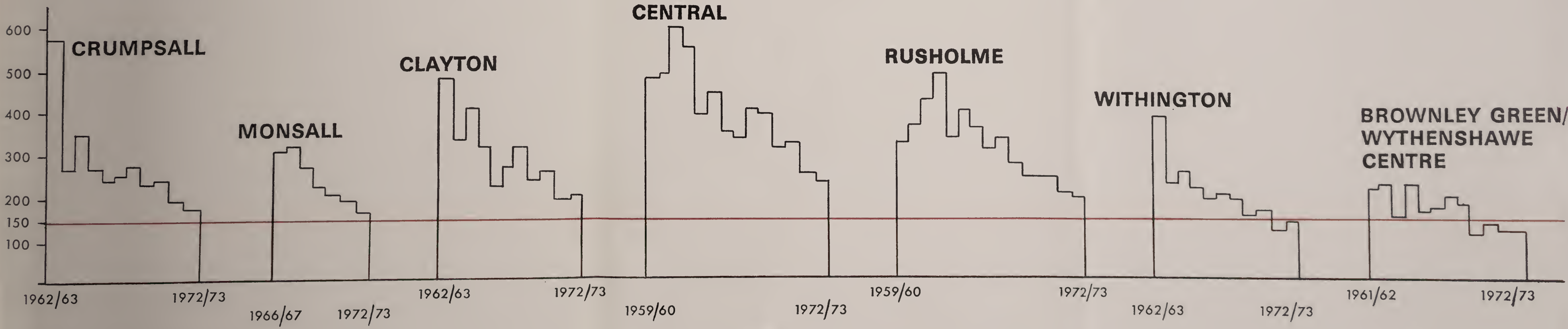
The Medical Officer of Health has acted for many years as Honorary Secretary for this organisation and on his retirement in December 1973 was succeeded by the Chief Public Health Inspector.

WINTER DAILY AVERAGES 1959-60 to 1972-73

SMOKE MEASUREMENT Microgrammes per cubic metre



SULPHUR DIOXIDE MEASUREMENT Microgrammes per cubic metre



Winter Daily Averages
Smoke and Sulphur Dioxide—Microgrammes per cubic metre.
Winter = October to March, inclusive

Station No.	(16) 1962 1973 Crumpsall		(19) 1966 1973 Monsall		(15) 1962 1973 Clayton		(11) 1959 1973 Central		(18) 1959 1973 Rusholme		(13) 1962 1973 Withington		(17) 1959 Brownley Green		(17) 1973 Wythenshawe Centre		(22) 1972 1973 Hulme	
Winter	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2	Smoke	SO_2
1959–60							374	479	384	325			287					
60–61							326	481	424	361			297					
61–62							383	587	464	434			198	217				
62–63	628	576			450	474	356	543	496	487	423	384	208	284	85	219		
63–64	341	269			410	326	294	385	407	337	236	218	123	173	124	143		
64–65	386	351			448	407	278	436	441	400	199	248	158	218	160	224		
65–66	174	267			244	312	161	344	236	357	118	210			96	160		
66–67	129	243	244	310	218*	223*	140	328	210	303	95	183			86	162		
67–68	90*	252	273	315	306	264	135	395	210	332	95	192			88	190		
68–69	178	271	187	262	222	313	156	391	150	274	98	187			80	172		
69–70	152	235	170	227	175	237	116	307	92	246	67	149			65	102		
70–71	158	240	174	209	149*	254*	142	312	159	243	91	167			105	138		
71–72	84	195	118*	202*	95	196	86	244	102	204	45*	118*			47	110		
72–73	84	178	91	183	108	201	67	232	109	199	41	130			49	111	78	165
Reduction % ..	86·62	69·10	62·70	40·97	76·00	57·59	82·08	51·57	71·61	38·77	90·33	66·15	$\frac{287}{49}$	$\frac{217}{111}$	82·92	48·84		

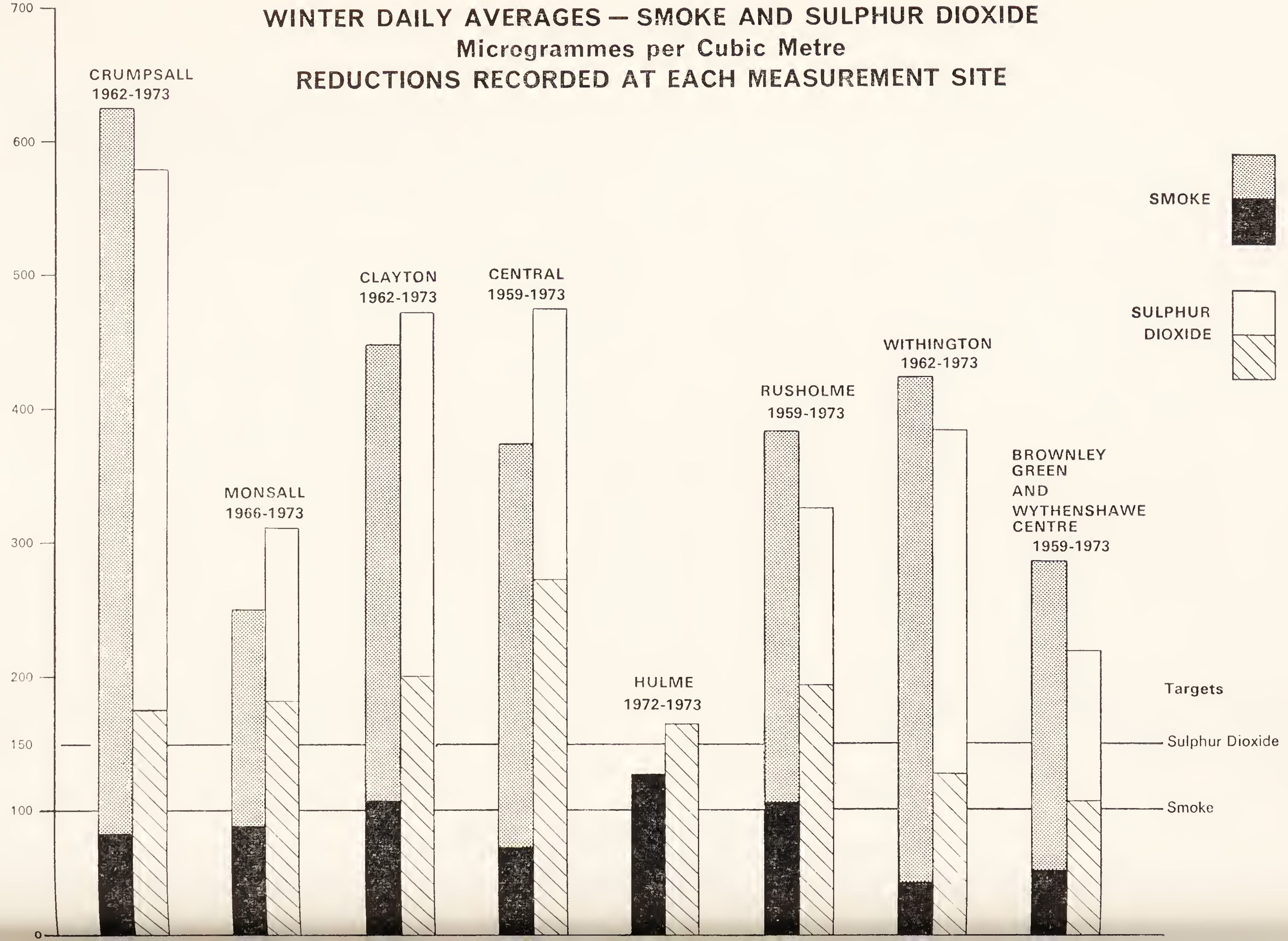
Overall Average Reductions. Smoke 78·89 per cent. Sulphur Dioxide 53·28 per cent

*Crumpsall	5 months average. Figure for March 1968 not available.
*Monsall	4 months average. Figures for February and March 1972 not available.
*Clayton	5 months average. Figure for January 1967 and January 1971 not available.
*Withington	5 months average. Figures for March 1972 not available.

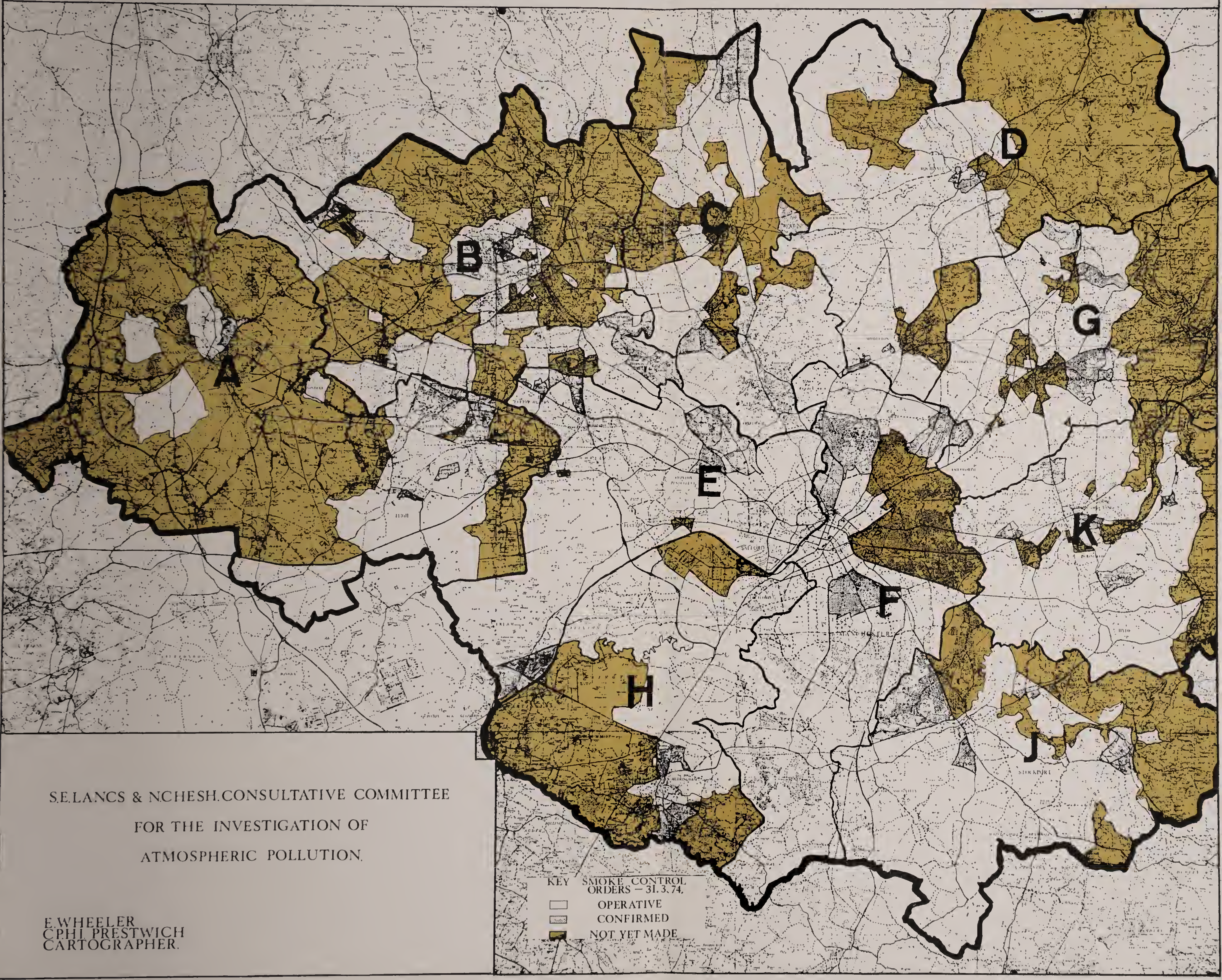
WINTER DAILY AVERAGES — SMOKE AND SULPHUR DIOXIDE

Microgrammes per Cubic Metre

REDUCTIONS RECORDED AT EACH MEASUREMENT SITE



GREATER MANCHESTER METROPOLITAN AREA
1974 PROGRESS IN SMOKE CONTROL 1974



S.E.LANCS & N.CHESH.CONSULTATIVE COMMITTEE
FOR THE INVESTIGATION OF
ATMOSPHERIC POLLUTION.

E.WHEELER
C.P.H.I. PRESTWICH
CARTOGRAPHER.

Number of days on which ''hazardous conditions'' COULD have occurred.

Winters 1971–72   1972–73 (October–March).

Station No.	21 Crumpsall	19 Monsall	15 Clayton	11 Central	22 Hulme	18 Rusholme	13 Withington	17 Wythenshawe
1971–72	8	7*	12	3	Not available	7	1	1
1972–73	7	8	13	2	3	8	1	1

*Figures for March 1972 not available.

''Hazardous conditions'' = 24 hour average exceeding 250 ug/m³ for both smoke and sulphur dioxide on the same day.

Housing Conditions

A total of 47 public inquiries was held in respect of 47 Housing Compulsory Purchase and Clearance Orders. These orders included 6,196 houses and in 2,235 cases, 36 per cent, detailed re-inspections were necessary because of objections.

The Secretary of State for the environment confirmed 50 compulsory purchase and clearance orders, involving 5,703 houses. In 311 instances, 5·45 per cent, the Department of the Environment's Inspector changed the classification of the premises.

In addition to the houses dealt with in clearance areas, a total of 46 individual houses were inspected and found to be unfit.

In 1967, the City Council approved a scheme under which houses in proposed clearance areas could be purchased in advance of compulsory purchase proposals if, on inspection, they were not unfit. The scheme now extends to include unfit houses. The department investigated 13 applications for such purchase. Detailed survey revealed that nine houses were unfit and four were not unfit.

Progress with the current clearance area programme continued until the number of houses awaiting clearance was reduced to 18,199 by December 31st, 1973. Of this number 10,817 were in confirned clearance areas, and therefore due for demolition in the near future; 7,382 houses have been represented and await the decision of the Secretary of State for the Environment.

Represented during 1973: Supplementary Programme.

Area	*No. of Houses*	*No. of Families*
York, Lancaster and Cornwall Buildings, Cheetham	120 dwellings	89
Leyland Street, Harpurhey	105	98
121, 123 North Road, Clayton	2	—
Temperance Buildings, Crown Lane ..	12 dwellings	3
Orme Street, Beswick	371	361
Meech Street, Openshaw	5	4
	615	555

As will be seen from the foregoing table the number of houses represented by the Medical Officer of Health as being unfit was the lowest total for many years. It represents the first instalment of the supplementary clearance programme. The 1972 house condition survey revealed that probably a further 6,000 houses were, or would become, unfit by 1980 and the number dealt with in 1973 has to be deducted from this total.

A more detailed survey, as required by Section 70 of the Housing Act, 1969, is in progress to identify the location of the houses. All the houses in the City will be surveyed as soon as possible but the initial work is concentrated in the older areas of the City.

Although the experience of the department suggests that the figure of 6,000 is probably reasonably accurate many of the houses may be found to be capable of restoration even if only for a limited period of time. Some will clearly be dealt with in future clearance areas and others demolished or closed under Part II of the 1957 Housing Act.

Rehousing for medical reasons

Applications for rehousing or transfer to other accommodation on medical grounds, numbering 4,482 were investigated. In cases which justified it the Medical Officer of Health made recommendations to the Housing Manager of appropriate degrees of priority for rehousing. The Housing Manager notified the rehousing during the year of 831 households as a consequence of recommendations previously made by the Health Department.

Overcrowding

There has been no systematic, national or local assessment of the actual degree of overcrowding. The 1972 House Condition Survey was used to gather information with regard to the City but the rate was so small as to indicate that overcrowding to Housing Act standards is not a major problem although the standards of the 1957 Act are still those of the late 1930's and as soon as is possible should be revised. Each case of overcrowding which comes to the notice of the department is notified to the Housing Department and the head of the affected household is advised to register for rehousing by the Corporation if this has not already been done.

In 1973, 136 cases of overcrowding were thus reported to the Housing Department.

Residual life of property

Annually the department deals with many enquiries regarding the residual life of dwellings. These enquiries are received by post, telephone and by personal enquiry. Most of the enquiries come from members of the public or their professional advisors and enquiries are also made by other departments, for the information is of vital importance to them. A total of 23,138 such enquiries were made during 1973. While the original clearance programme was being dealt with it became possible to give accurate forecasts of residual life of property and the department now aims to be able to provide a similar service again as soon as possible. This information is of considerable importance to private citizens, solicitors, estate agents and building societies as well as to the Corporation itself. After April 1st, 1974, it will also be of value to the Greater Manchester County Council.

Houses in multiple occupation

City of Manchester (Houses in Multiple Occupation) Informatory and Regulatory Scheme, 1970.

Part 1.	Total houses registered	657
	Registered, after inspection, during 1973	76
Part 11.	Registered as control provision houses	23
Section 57.	Manchester Corporation Act, 1950 (Houses let in lodgings)	
	Total houses registered	368
	Conditionally registered during 1973	142

It is thought that there are still many houses in multiple occupation in the City which have not been registered or received the Council's consent. The City Planning Department, the Rates Department and the Fire Department advise this department when a house in multiple occupation is found and they are kept informed when such houses are dealt with by the Health Department.

During the year management orders under the Housing (Management of Houses in Multiple Occupation) Regulations, were made on 28 premises where standards of management were unsatisfactory.

Formal action had to be taken in connection with unsatisfactory conditions and defects in 170 cases and 40 prosecutions were instituted for various contraventions. Fines and costs amounting to £503 were imposed.

Purpose-built students accommodation

The department's attention having been drawn to proposals to construct purpose-built accommodation for students attending higher education institutions, it became necessary to review the standards of accommodation proposed to be provided as such residences fall within the designation of houses in multiple occupation and were, thus, registerable under the Corporation's registration scheme. It was found that the proposed standard was less than that recommended to the Health Committee. Accordingly conversations were held with the University Authority with a consequent invitation to the Health Committee to visit premises already constructed. The Health Committee visited student residences at Owens Park, Fallowfield, Cornbrook House and Grosvenor Place, Chorlton-on-Medlock. From these visits it could be seen that standards were declining.

Further consultations took place with the University and U.M.I.S.T. and on 3rd July the Health Committee approved a standard of accommodation for such dwellings and, further, recommended that as this was essentially a national rather than local problem the question should be brought to the attention of the A.M.C. A survey carried out by the department revealed that there was a wide variation in standards adopted by various local authorities and that many were content to adopt standards lower than those regarded as acceptable in Manchester. It is, however, important to remember that buildings so constructed for students' accommodation are likely to remain in use for upwards of 50 years and with ever rising levels of accommodation thought ought to be given to the requirements of the future.

As further accommodation, in some cases by newer academic bodies, will be built the matter is being kept under review.

New permanent dwellings completed

In 1973, the Corporation completed the construction of 2,618 dwellings; 2,459 in the City and 159 outside. In the City private developers and Housing Associations built 166 and 358 dwellings respectively. Additionally 488 flats were provided by University Authorities for students and staff.

The annual totals since 1946 have been as follows:—

Year	Completed by the City Council		Completed by private builders Housing Assoc'ns
	Dwellings in the City	Dwellings outside the City	Dwellings in the City
1946 ..	293	—	36
1947 ..	542	—	197
1948 ..	1,772	—	356
1949 ..	1,461	—	298
1950 ..	2,146	—	270
1951 ..	2,415	—	209
1952 ..	2,142	80	322
1953 ..	2,162	437	390
1954 ..	1,055	1,086	303
1955 ..	692	1,251	566
1956 ..	684	684	368
1957 ..	751	796	514
1958 ..	818	639	349
1959 ..	517	965	239
1960 ..	392	562	260
1961 ..	816	445	381
1962 ..	1,476	1,409	508
1963 ..	1,424	2,442	282
1964 ..	892	3,047	544
1965 ..	1,354	2,076	561
1966 ..	956	1,636	252
1967 ..	1,957	827	417
1968 ..	1,881	465	391
1969 ..	1,993	1,009	263
1970 ..	2,442	595	289
1971 ..	2,225	1,796	852
1972 ..	2,581	938	538
1973 ..	2,459	159	524
Totals ..	40,298	23,344	10,479
	63,642		

Repairs and inspection of dwellings

Complaints received from the public in respect of defective conditions at dwelling houses numbered 4,584 and all were investigated by Health Inspectors. In the discharge of this duty a total of 11,748 visits were made.

In the first instances owners are notified informally of the defective condition and if after a reasonable time they fail to carry out remedial work statutory notices are served, either under the Public Health Act, 1936, or the more expeditious Manchester Corporation Acts. This involves the preparation of a schedule of work which, whilst constituting an exact specification for a builder, is not unintelligible to the layman.

The expert knowledge of building construction possessed by the department has also been made available to owner occupiers of dwellings and to other departments. This service is appreciated and has proved particularly helpful in dealing with intractable defects e.g. condensation, and dampness.

In default of compliance with a statutory notice the Corporation has in certain instances power to execute the work; this is carried out by approved contractors under the supervision of the department and the cost of £17,717 was recharged to the owners of the property.

Applications to the Court for an Order requiring the owner to abate a condition which was injurious to health or a nuisance had to be made in 27 cases and nine Orders were granted. In 18 cases the proceedings were withdrawn because at the date of the Court hearing the work had been carried out.

The practice continued of referring dangerous conditions of buildings to the attention of the City Architect's department.

Trees impeding light

The power which the department obtained in the Manchester Corporation (General Powers) Act, 1971 to deal with trees which restrict the admission of light to houses, shops and offices, has always to be applied with care and consideration. This year was ''Plant a Tree Year'' in the Department of the Environment's programme of amenity improvement. In every case of complaint of trees impeding light, where a nuisance of this kind is proved, the department works in close co-operation with the Director of Parks, whose tree specialists advise in the method best suited to particular circumstances and which can often avoid felling. The assistance which is given by the Parks Department in these cases is generously acknowledged. The aim is usually to achieve a compromise which satisfies both complainant and the owner of the tree. The latter person, of course, is the one who pays the bill.

Rent control and qualification certificates

In August, 1972 the Housing Finance Act, 1972 came into force. Part III of the Act superseded Part III of the Housing Act, 1969 and effected certain changes in the qualification certificate procedure for converting into regulated tenancies, those controlled tenancies which are brought to the qualifying standard, that is, when a dwelling is provided with the standard amenities, is in a good state of repair and is fit for human habitation.

Previously, if a landlord failed to obtain a certificate of provisional approval before starting any improvement works to provide missing amenities, he could not obtain a qualification certificate. This is no longer obligatory and even if he makes no application in connection with the qualification certificate procedure until after he has completed the necessary works, he is eligible for a qualification certificate once the dwelling satisfies the qualifying conditions. Nevertheless, during the year a number of landlords have continued to ask for provisional certificates in order to ensure that any works they propose to carry out will be adequate to meet the qualifying conditions.

Formerly the tenants right of appeal to the county court against the issue of a qualification certificate lay only where the dwelling was or was claimed to be provided with all the standard amenities before August, 1969. Under the Housing Finance Act, 1972, the tenants right of appeal is not restricted. Both tenants and landlords have a right of appeal against the decision of a local authority either in the issue of a qualification certificate or the refusal to do so. No appeals have been lodged so far.

Part IV of the Housing Finance Act 1972, provides for a general programme for conversion from rent control to rent regulation with tenancies becoming regulated on certain dates depending on the rateable value of a dwelling on the 31st March, 1972. The following table shows the applicable dates:

Rateable Value on 31st March, 1972 (England and Wales excluding London)	Date on which tenancy becomes regulated
£60 or more	1st January 1973
£45–£59	1st July 1973
£35–£44	1st January 1974
£25–£34	1st July 1974
£20–£24	1st January 1975
Less than £20	1st July 1975

Any dwellings formally notified as unfit are excluded from the programme.

Qualification Certificates

Year	1970	1971	1972	**1973**	Total
Applications received	1,699	985	511	250	3,445
withdrawn	—	149	1,300	88	1,537
granted	10	451	584	100	1,145
refused	—	—	—	—	—

It will be seen from the above table that the numbers of applications for qualification certificates continue to show a steady decrease and this trend is expected to continue as the general programme for conversion from rent control to rent regulation proceeds.

Of the total applications received 763 still remain to be resolved. This is due to the large number of houses which on inspection were found not to meet the required standards as to the state of repair and provision of amenities. In those instances, the applications were not refused but in accordance with a Ministerial recommendation in each case a schedule of the works necessary to bring the dwelling to the qualifying standard was supplied to the landlord who was encouraged to carry out the appropriate work.

Of the 250 applications received during this year, 228 were combined with applications for improvement grants towards the cost of providing missing amenities and bringing the dwellings to a satisfactory state of repair.

Rent Act, 1957

No applications were received for certificates of disrepair.

Landlord and Tenant Act, 1962

As amended by the Rent Act, 1968

Under the provisions of the Landlord and Tenant Act, 1962 it is the duty of a landlord to provide a rent book or similar document in respect of a dwelling let at a weekly rent.

The Rent Book (Forms of Notice) Regulations, 1972, which came into operation on the 1st January, 1973, revised the form of notice of information for the tenant to be inserted in rent books provided for dwellings subject to controlled or regulated tenancies.

Action was taken in those cases coming to the notice of inspectors where there was non-compliance with the requirements of the Act and Regulations.

Vacant Houses

There are in the City many houses which have been left vacant through them being abandoned by owner occupiers who have disappeared or owners who refuse or are unable to let or sell. These properties, often in residential districts, quickly become the target for vandals and tippers of rubbish. The neglected property rapidly reduces the amenity of surrounding houses, resulting in bitter complaints from the adjoining occupiers and involving the Department in expensive repetitive measures of refuse removal and the securing of doors and windows to prevent trespass.

Following representations by the Department in respect of one particularly bad case in Chorlton, compulsory purchase of this house is to take place and a survey for possible similar action in respect of other similar property around the City is to be undertaken by the Town Clerk's referencing section and the initial work is being carried out in an area suggested by the department.

The restoration of such houses to satisfactory dwellinghouses would materially assist in relieving the shortage of houses.

Improvement of houses

Although in recent years the department has been associated mainly with the clearance of unfit houses, this represents only one facet of the department's activities directed towards the improvement of living conditions. While a major effort has been directed towards the removal of unfit houses there has also been a continuous programme of house repair under the Public Health Acts and the improvement and conversion of dwellings under the Housing Acts.

Because of the determination of the City Council to secure the highest possible standard of housing and to concentrate initially on the removal of unfit houses the accusation has been made that the Council and the department have been disinterested in improving houses. This is untrue. Having worked through a comprehensive clearance programme emphasis can now be placed on improvement but this is largely because the worst of the housing has, or is about to be, removed. Although the national housing policy remains unchanged there has been a swing of opinion towards furthering the improvement of houses rather than redevelopment. While there is merit in this point of view having regard to the continuing shortage of housing, it cannot be too strongly urged that the temptation to regard improvement as a substitute for clearance should be resisted. Where houses are unfit and cannot reasonably be improved then they should be removed from the housing stock. It is a popular fallacy that any house can be improved but this is not the case. Many houses are incapable of satisfactory improvement although they might be provided with the standard amenities and repaired to give a further limited period of life. In order to make a worthwhile, economically justifiable improvement, a dwelling must be guaranteed a life which will take it into the 21st century. With the rapid changes in social tastes it takes a degree of boldness to be able to forecat what will be socially acceptable in 2000 A.D. and critics of the policy of clearance and development might care to ponder on the possible judgement of posterity on the wisdom of improving, without careful discrimination, houses currently 70–90 years old.

In March 1972 the rate of grant aid in Manchester was raised from 50 per cent to 75 per cent. This, coupled with an easier financial situation and a buoyant house market, resulted in an inflow of grant applications far greater than previously experienced. Because the department's resources were fully committed to completing the clearance programme 1973 was approached with a considerable backlog of applications not dealt with. The inflow of grant applications rose further in 1973 and the change from standard to improvement grants continued. Although the effects of servicing the public inquiry programme took many more man days than anticipated an improved staffing position enabled a greater allocation of resources to grant applications to be made with a consequent improvement in the situation with a reduced backlog at the end of the year and a shorter period of time elapsing from receipt of applications to their approval.

By the autumn target handling times were being met for standard and special grants but a further improvement is needed to achieve a satisfactory short period of time for the approval of improvement grants. It is anticipated that this target will also be reached shortly.

The proportion of applications withdrawn or refused has been unusually high. The main reason has been that the high rate of grant has attracted applications from house owners for work which is outside the scheme. The most frequent causes of refusal have been for applications relating only to works of repair or replacement or for schemes in respect of modern, or otherwise satisfactory, houses.

The improvement grant scheme is difficult to administer. Under the Housing Act, 1969 the Central Government instructed local authorities to ignore previously issued guide lines. These had been in force for a number of years and had resulted in the establishment of many sensible principles which could not rationally be abandoned. Additionally, constraints implied in the schemes, the need to comply with Building Regulations and the Town Planning Acts, the importance of achieving an economical but satisfactory and satisfying improvement together with the need to exercise prudence in the expenditure of public funds mean that an application for grant aid needs careful scrutiny and cannot be simply a ''rubber stamp'' exercise.

Hence an improvement grant application can be a most complex matter requiring mature judgement by skilled staff who are in short supply. In common with other authorities the department has been criticised for delay in dealing with applications and for apparently being inconsistent with other authorities. There are many reasons for the length of time it takes to deal with an application and most of these are outside the control of the department. For example only about 30 per cent of the applications arrive satisfactorily documented and the department has to request plans, specifications and estimates. Not infrequently an applicant has to be reminded several times that progress with his application can only proceed further when he has supplied information obtainable only by him. The department is always looking for improved methods of dealing with applications.

As far as comparison with other local authorities standards are concerned it is difficult to get accurate information and when enquiries have been made it has usually been found that the different decision has been made because of different circumstances and local authorities have clearly been exercising their discretion properly as the Act permits.

Major points of difference which have emerged however have been attitudes to the building of extensions and the enlargement of kitchens. The department has always taken the view that grant aid was not available to enlarge the accommodation of a house by building on extra living and bedrooms and although some local authorities have permitted this the department has no reason to believe that its interpretation of the provision of the scheme is not correct.

As far as kitchen enlargements are concerned, it has proved difficult to find a consistent trend of opinion in local authorities and it is very difficult in a large city such as Manchester with hundreds of house types, to be entirely consistent in decisions. There is a number of limiting factors. Firstly, the scheme is not intended to provide financial assistance for the improvement of modern houses although the term ''modern'' is not defined. Secondly grant aid is not available for any house which is clearly satisfactorily equipped and opinions must vary as to what constitutes a satisfactorily equipped kitchen. In a major improvement scheme a local authority is entitled to use its discretion to permit the creation of a kitchen to ''Parker Morris'' standards of size and equipment but for an ordinary improvement it is not entitled to go beyond the 12 point standard which is to require satisfactory facilities for the storage, preparation and cooking of food. The department considers that this concept of a kitchen is inconsistent with family needs and certainly falls short of modern social concepts.

It is considered that a modern house requires satisfactory facilities for carrying out domestic laundry and airing of washed clothing and household linens. The 12 point standard does not recognise this need nor the need to accommodate within the kitchen area sufficient furniture and circulation space to permit some meals, such as breakfast, to be taken informally, and by smaller numbers than the whole family.

While recognising that it would be inequitable to permit the expenditure of public funds for providing the type of kitchen now required by many housewives while there is so much substandard housing to be dealt with it would be helpful if future amendments to the scheme could allow local authorities greater scope in dealing with such inadequate facilities as unauthorised lean-to extension kitchens and the ''rear living-kitchen'' traditional in the northern region two up—two down terrace houses.

Criticism which has been made nationally with regard to improvement grants is that they have been often applied to the wrong types of property and have not been going to the areas of need. Especially criticism has been levelled at flat conversions, the improvement of vacant houses for re-sale, the conversion of derelict or unsuitable agricultural property to luxury dwellings or one for creation of second houses in areas where local residents cannot afford as a first house the price which many can afford for their second.

In Manchester there is clearly little scope for the creation of second houses or the conversion of rural buildings but some advantage has been taken of the increased value acquired by an improved vacant house.

The department has also received many applications for grant aid in respect of houses being converted into a number of smaller self contained dwellings. Although some schemes had not been finalised by the end of the year 54 received approval and these produced 214 dwellings. The cost of the scheme was £254,664 and grant aid amounted to £411,192.

Schemes of this nature have been the subject of controversies during the year and it has been suggested that those which would have been commercially viable ought not to receive grant aid. However, the additional dwellings are a valuable addition to the City's housing stock and grants have not been withheld from those schemes which were worthwhile improvements. Nevertheless, the department maintains sharp vigilance to detect any malpractice in this connection, and permits no grant aided work which is not clearly recognisable as a contribution to the formation of a satisfactory dwelling.

In Manchester there seems to be evidence that, in general, the applications for grants are coming from the areas with the greatest amount of improvable houses.

Publicity, promotion of house improvements

The increase in the flow of grant applications was undoubtedly due to a continuation of the national publicity on improvement grants and the increase in the level of grant.

Local publicity was somewhat restricted partly due to the fact that although the department has a programme of monthly visits by the Department of the Environment's mobile exhibition this was cancelled by the Department during the summer as part of a deliberate policy to restrict publicity in the 75 per cent grant areas. This was unfortunate because excellent use was made of the mobile exhibition in the City by locating it in areas ripe for improvement and accompanying this by an intensive campaign in the Manchester area by the department in the form of leaving pamphlets at each house and displaying posters. Crude monitoring of later applications indicated that the use of this method of publicity resulted in an increase in grant applications.

With the ending of the 75 per cent grant rate and revision to the 50 per cent level the department intends to intensify its publicity activities.

In the promotion of house improvements the construction industry itself has an important role in stimulating applications and it is hoped that the industry, particularly as represented by the small and medium sized builder, will increasingly help to generate the uptake of grants.

Special Grants

This relates to the provision of standard amenities in terms of multiple occupation and the Council has a discretion in their approval. Accordingly, no special grants are made to enable a house in multiple occupation to be established or, in the case of an existing house in multiple occupation, if the house could be converted into self contained units. In such cases the owner is advised of the availability of grant aid for suitable schemes for self contained units.

In 1973 nine special grants were approved relating to the provision of 22 households.

General Improvement Areas

No more General Improvement areas were declared during the year. In accordance with the promise given the department increased the work input into the Brailsford Road and Lecester Road General Improvement Areas, following the completion of the clearance programme inspections. Two public health inspectors and two technical officers were allocated to the areas with work relating to them to be a first charge on their time. As a consequence many thousand man hours of work were carried out by the department with a resultant increase in the uptake of grants. Although response has been less than was anticipated progress in the two areas appear to have been rather better than national experience.

During the year the six show houses were opened and staffed by the department for the benefit of the local residents. The purchase of property so as to enable the second phases of environmental improvement to be carried out continued although little work was done in this connection as future progress depends on the completion of all the purchases.

In mid year general oversight of improvement areas was transferred to the Housing Manager and in the late autumn the Housing Department appointed two improvement officers to work in the area in a co-ordinating capacity.

As far as Temple Square, Cheetham (No. 3 G.I.A.) is concerned the houses are totally owned by the Corporation.

Improvement grant applications in the two private sector areas have largely been from owner occupiers. Landlords, with notable exceptions, have been less willing to secure the improvement of the property.

Project Areas

In addition to the General Improvement Areas the department has been active in promoting improvements in a number of other areas which have been called ''project areas'' because they have been the day to day responsibility of a single inspector who has made it the first charge on his time. Additionally some priority has been given to the areas mainly because in their varied composition they afforded unusual learning situations from which lessons can be learnt which will be beneficial elsewhere. The areas so distinguished are:—

1. Hayden and Ruskin Avenues, Moss Side.
2. Sutton Trust Estate, Gorton.
3. Moon Grove, Rusholme.
4. Levenshulme Improvement Society applications.
5. The Groves, Longsight.
6. Crab Lane, Blackley.
7. Crossways, Didsbury.
8. Cresswell Grove, Didsbury.
9. Acres Road, Chorlton-cum-Hardy.
10. Rushton Street, Didsbury.
11. Moor Road, Northenden.

Of these the Hayden and Ruskin Avenue project has been a particularly successful backing up operation for an energetic Residents Association. Of 90 owner occupiers no fewer than 62 applied for grant and the residents association has been successful in securing the interest of landlords in the area.

The Sutton Trust decided that their financial interest was marginally better served by operating under Section 21 of the Housing Act, 1969, and after the department had done considerable preliminary work with them, including participating in a public residents meeting, the alternative system has been adopted, and formal applications for grant aid are not now made to this department.

Projects 6–11 refer to houses within declared Clearance Areas and subject to Compulsory Purchase Orders where the owners are desirous of exercising their statutory right to produce alternative proposals to the Council's recommendation that the houses should be cleared. The Health Committee requires that schemes should be prepared for complete blocks of property and that, in the full light of the financial implications the owners give an undertaking to execute all the agreed work within a limited time. In each case the owners are advised to appoint a professional adviser to act in their interests with the department's inspector. Only in the case of Crab Lane, Blackley has the procedure been tested before a public inquiry and the Secretary of State's decision was awaited at the end of the year. The Chairman and Vice-Chairman of the Health Committee held a number of meetings with the representatives of residents in the areas, the meeting also being attended by technical officers of the Health Department and other departments.

Common lodging houses

The two registered common lodging houses in the City, 8/10 Francis Street and 6 Chepstow Street, are both controlled by the Salvation Army. At the Francis Street premises the permitted number of occupants remains at 250 and the average number of beds occupied nightly was 203. Conditions continue to be satisfactory.

The disinfestation of verminous persons at both the above hostels is carried out, as required, by the Health Department disinfestation service.

There was a change in management in mid-year. The Chepstow Street premises are still being used pending the construction of the new Salvation Army Hostel in Hulme, but the permitted number of occupants has been reduced to 180, the average number of beds occupied nightly being 150. Charges at Francis Street are; Dormitory beds 94p per day, cubicle beds £1·04 per day for full board, including value added tax. At Chepstow Street the charges are 65p per day for bed and breakfast, the charge including value added tax being charged.

Caravan dwellers

Two long established sites in private ownership licensed in accordance with the Caravan Sites and Control of Development Act 1960 continued to operate.

Gypsy Caravan Park: Part II, Caravan Sites Act 1968.

A Caravan Park provided by the Corporation, to comply with the requirements of the above Act, provides 16 pitches, arranged in groups of four with separate sanitary and amenity facilities for each family. Four pitches have two standings to accommodate families with two vans.

A basic weekly rent, inclusive of rates of £2.75 was charged per pitch and there were no rent arrears.

A high occupancy rate was maintained and frequently there was a waiting list for places.

The length of stay of families is shown in the following table.

Length of Stay Gypsy Caravan Park

	1973
Under 5 Weeks	1
5 Weeks under 10	2
10 ,, ,, 15	1
15 ,, ,, 20	1
20 ,, ,, 25	3
25 ,, ,, 30	2
30 ,, ,, 35	Nil
35 ,, ,, 40	2
40 ,, ,, 45	Nil
45 ,, ,, 50	1
50 ,, ,, and over	10

It will be noted that the majority of families have ceased to be travelling people and use the park as a fairly permanent home.

Standards of cleanliness showed some improvement but continued to fall short of what the department hopes to achieve.

Educational, medical and social service facilities were available, and families experienced no difficulty in obtaining the help they required.

Itinerant dwellers

In the first three months of the year the department had frequently to take action to deal with complaints concerning the illegal occupation of land and alleged nuisance by itinerants, mainly Irish Tinkers.

The provision of the Caravan Park, referred to above, enabled the City Council under the terms of Part II of the Caravan Sites Act 1968 to apply to the Department of the Environment for a designation order to prohibit the occupation of land by itinerants.

The Order was made, taking effect from the 1st April 1973 and proved effective in dealing with this long standing nuisance. No legal proceedings under the terms of the Order were necessary.

Canal boats

Canal boats continued to be used for the carrying of grain from Manchester docks to the Kellogg factory in Trafford Park. The traffic was infrequent, depending on the discharge of cargo from freighters in the docks.

The canal boats inspected at Hulme locks were crewed by men who only sleep on board during occasional journeys to the Liverpool dock complex. No cases of infectious disease have been reported and the conditions in the craft were found to be mainly satisfactory.

Occupational Hygiene

Industrial premises

With the exceptions of requirements in respect of sanitary accommodations in all factories and the cleanliness, overcrowding, temperatures, ventilation, and drainages of floors in factories without mechanised power, the responsibility for the enforcement of the Factories Act, 1961, and related regulations is that of the Department of Employment H.M. Factory Inspectorate.

The number of factories on the departmental register and subject to inspection by health inspectors was:—

Mechanical	4,099
Non-Mechanical	276
Others	41
	4,416

Non-industrial employment

Offices, Shops and Railway Premises Act, 1963

The department is responsible for the enforcement of the provisions of the Offices, Shops and Railway Premises Act, 1963, at 9,778 premises where approximately 150,000 persons are employed.

The Act, which follows the pattern of the Factories Act, includes provisions relating to cleanliness, overcrowding, temperature, ventilation, lighting, sanitary conveniences and washing facilities, drinking water, safety of machinery, hoists and lifts fire precautions, first-aid facilities and the notification of accidents.

Registration

Premises registered in the year for the first time totalled 372 and the majority of these came to light as a consequence of an inspection by the department. The total number of registered premises and of persons employed at the end of the year is shown in the following table:—

Class of premises	Number of premises registered during the year	Number of premises withdrawn from the register	Number of registered premises at the end of the year	Number of persons employed
Offices	186	367	4,750	102,612
Retail shops	113	364	3,544	21,724
Wholesale shops, warehouses ..	54	61	645	13,728
Catering establishments, canteens	19	96	828	12,646
Fuel storage depots	—	1	11	70
Totals **1973**	372	889	9,778	150,780
1972	635	603	10,295	154,950

Inspections and contraventions

There were 504 detailed inspections of premises made under the Act. The class of premises inspected being as follows:—

Offices	255
Retail shops	173
Warehouses, wholesale shops	44
Catering establishments	30
Fuel storage depots	2
	504

Arising from these inspections the following unsatisfactory conditions were found and dealt with:—

Analysis of contraventions

Section	Number of contraventions found		Section	Number of contraventions found	
4	Cleanliness	162	15	Eating facilities	4
5	Overcrowding	—	16	Floors, passages, stairs	118
6	Temperature	63	17	Fencing exposed parts machinery	97
7	Ventilation	44	18	Protection of young persons	—
8	Lighting	68	19	Training of young persons	—
9	Sanitary conveniences	52	23	Prohibition of heavy work	—
10	Washing facilities	95	24	First aid	137
11	Supply of drinking water	10		No abstracts	178
12	Clothing accommodation	10		Others	65
13	Sitting facilities	—		Not registered	159
14	Seats (sedentary workers)	10			
				Total **1973**	1,272
				Total 1972	2,594

Legal proceedings

Usually, compliance with the various requirements of the Act was secured after informal action, but it was necessary to institute prosecutions in the following instances:—

Section of Act		Informations laid	Convictions
4	Cleanliness	2	2
6	Temperature	1	1
8	Lighting	1	1
9	Sanitary conveniences	1	1
16	Floors, passages, stairs	2	2
17	Fencing exposed parts machinery	4	4
19	Training of young persons	2	2
22	Dangerous conditions and practices	1	1
24	First aid	2	2
50	Abstract of information for employees	2	2

Fines and costs amounting to £137·00 were imposed.

Accidents

Notification of 254 accidents causing disablement and absence from work of more than three days were received, compared with an almost similar number, 253, in 1972.

Analysis of reported accidents

Cause	Offices	Retail shops	Wholesale warehouses	Catering establishments open to public, canteens	Total **1973**	Total 1972
Machinery	3	6	3	1	13	15
Transport	—	—	—	—	—	2
Falls of persons	33	44	12	15	104	82
Stepping on or striking against object or persons	18	20	6	1	45	60
Handling goods	7	17	11	8	43	58
Struck by falling object ..	7	17	10	4	38	20
Fires and explosions ..	1	—	—	2	3	1
Electricity	—	—	—	—	—	2
Use of hand tools	8	—	—	—	8	7
Not otherwise specified ..	—	—	—	—	—	6
Totals **1973**	77	104	42	31	254	—
Totals 1972	103	86	36	28	—	253

The Act itself and its ensuing regulations and guides are often outstripped by the pace of events. A large commercial centre such as Manchester produces situations not envisaged by the architects of the Act and it is essential that the inspectorial and supervisory staff should be able to recognise and relate the various situations, practices and equipment involved in the movement of people and materials about commercial premises, and the handling and processing of data in offices, and the handling and storage of goods.

The wide fields of fire prevention, occupational health, environmental pollution all impinge on safety, health and welfare. It is often imperative to secure expert assistance to assess risks and hazards in unexpected emergencies and experts in chemical, electrical and mechanical engineering, lighting, noise and ventilation may need to be consulted with regard to matters in their own fields.

The traditional inspectorial standards and attitudes have developed over a period exceeding a century. The fact that they have survived and developed is testimony to their tenacity and flexibility. Both of these qualities will be much needed in reconciling the new attitudes and systems likely to be brought out by any reformed occupational hygiene organisation.

Progressive employers have always been in the van of improved working conditions. Progressive trade unions have co-operated where co-operation was productive and have exerted pressures where this has been needed. Although safety induced by coercion ought to be replaced by safety resulting from enlightened self interest it will need the energetic operation of the proposed new legislation if further progress is to be achieved.

A successful system of occupational hygiene can only be based on the full knowledge by enforcing authorities' of the location of premises employing workers and this requires an efficient registration system. Any amendment of the law should require firms to notify the ending of occupation of premises as well as the commencement.

The registration return this year has been affected by the removal of many older registrations often following demolition and redevelopment. The closure of Smithfield Market and large scale city-centre clearance and redevelopment is in an interim stage with very many firms being displaced while the new premises are not yet built or occupied.

The department continued to investigate a very high proportion of accidents notified. Apart from fatalities involving malfunction of machinery most accidents result from often inexplicable carelessness or ignorance of the basic rules of safety.

A serious incident resulting in injury to a group of warehouse employees arose from the collapse of unbraced storage gantries carrying tons of material up to a height of over 10 feet. Elementary precautions in design and fixing had been ignored and luckily the affair did not have fatal results.

One accident did, however, have fatal consequences and the investigation of this accident necessitated the employment of a consulting engineer. At the inquest the investigating public health inspector was invited by H.M. Coroner to sit with him as a technical assessor.

In this case an error in not replacing a component during a lift reconditioning operation resulted in the car "floating" when the occupant was alighting. He was trapped and asphyxiated because he was alone and unable to extricate himself. The reliance on old control gear proved to be a fatal error. The matter was reported to the Department of Employment for widespread publicity to avoid similar occurrences and a full report was published in the journal of the Association of Public Health Inspectors.

The use of compressed gases gives rise to many hazards from fire or explosion but an unusual incident resulted in "frost burns". Attempts to free a blocked valve from a gas pressure vessel feeding a motor resulted in a sudden discharge over the hands of the operator and his gloves were frozen solidly to his hands when the gas was suddenly released.

If pressurized gas is widely introduced to provide alternative fuel for power and heating great care will have to be taken to ensure that the equipment is treated with the care it requires.

There is an increasing tendency for occupiers of premises not designed and laid out for mechanical handling of goods to improvise their own versions of lifts which range from adapted forklift vehicles to skimped; inadequate hoists not designed for use in restricted spaces. The fact that such installations do not have "platforms" puts them outside the control of the 1968 Hoists and Lifts Regulations. A great deal of work was entailed in dealing with two such cases and, after representations, both installations were withdrawn from use until made safe. The preparation of schedules of the remedied work which was required involved widespread research and consultation, and the Factory Inspectorate Engineering Division gave helpful advice.

The use of conveyors with inherent trapping risks continues to give concern. Not only are the obvious in-running nips at feed positions unguarded, but tension and driving points are neglected. The innumerable dangers from the use of slatted conveyors raises the question as to whether their use is justifiable as it is often found impracticable to guard them satisfactorily.

Falls continue to cause a high proportion of accidents. Ladders not "footed" or not locked where feasible, cleaners who climb around buildings on cills, or use unsafe securing joints, or unfenced openings, and landings contribute to the toll which overtakes the unprepared.

People who work in "high risk" situations near machinery or in proximity to high risk areas, need especial protection. Cases where doors opening on to exterior loading ways are often not fenced, and similar openings near lift motor rooms were required to be fenced. An insecure lift motor room floor caused an engineer to fall and become trapped in the sheaves and pulley.

During routine inspections under the Offices, Shops and Railway Premises Act, two cases were discovered where persons had been injured during the course of their employment and the firm, a large supermarket company, had failed to notify the Department as the Act requires.

Proceedings were taken by the Department and the Magistrates convicted the firm for the offences of failing to notify the accidents to the Local Authority.

As one of the injured persons, a boy of 15, sustained serious injuries to an arm on a goods conveyor belt, it is likely that a civil action will result.

A decision to exclude butchers' preparation rooms from local authority control and define them as factories will increase demarcation problems. Not only are retail premises involved but multiple stores already embrace other factory process areas (such as furniture repair, clothing alteration, cleaning and operations such as heel bars and carpet preparation) so that both local authority and government inspection of one building becomes more involved. A more sensible arrangement would appear to be to make the local authority solely responsible. While butchers' machinery can be dangerous it is hazardous only to the operators, while filthy machinery puts all consumers of the products at risk. Accordingly, local authorities will continue to carry out food hygiene inspections at much more frequent intervals than are usual for Factory Act inspections and it is thought that in these circumstances the welfare of the operative would have been better served by coincidental safety and food hygiene inspections.

The legislation relating to safety health and welfare in non-industrial employment does not extend to educational establishments except as far as clerical and catering workers are concerned. The Factory Inspectorate is responsible for local authority establishments but this department is the appropriate authority for the University and its Institutes.

The University of Manchester Institute of Science and Technology has for many years taken very seriously its responsibilities for the safety of staff and students. It has a Safety and Environmental Health Committee on which all departments are represented and the body is under the chairmanship of one of the professors. The Principal Medical Officer (Environmental Health) and the Chief Public Health Inspector are invited members of this Committee, which meets each term.

The Institute sets very high standards in its approach to safety and it has pioneered the development of organised accident prevention and it is far in advance of many commercial groups whose concern for employees is often low. A major activity has been to produce an excellent safety manual available in all departments.

The manual's codes of practice and procedures for safe working are very good and any organisation having the supervision or the implementation of working conditions could benefit from a study of the extremely wide ranging subjects covered.

It is to be hoped that the consultants responsible for framing future legislation which might cover educational establishments, laboratories, etc. will study this manual and others produced by similar academic bodies.

1973 saw the completion of the first ten years of operation of the Offices, Shops and Railway Premises Act, 1963 and will possibly be the last full year of operation as the provisions of the Act may well be replaced by the statutory implementation of the proposals of the Robens Committee.

In many ways this decade has been momentous in that it has brought the local authority into contact with the Factory Inspectorate as never before in matters of occupational safety, health and welfare and this contact has lead to fruitful and profitable co-operation. In giving such substantial duties to local authorities, Parliament was adopting a wise course even if this was primarily, in the first instance, the consequences of the need to provide an economical service. However, Parliament seemed scarcely aware of the contribution that local authorities could give to this problem and possibly any revision of the statute might recognise the skill and effort which has been put into the task which was given by according to local authority inspectorates an equality of status.

Many of the functions given to local authorities under the Offices, Shops and Railway Premises Act were only an extension of activities already undertaken in other types of premises. Heating, lighting, ventilation, water supply, sanitary and washing facilities, cleanliness and the disposal and storage of refuse are the stock in trade of the environmental health officer. Not so were matters relating to the safety of electrical and mechanical equipment and, in this context, the public health inspector has had to meet the challenge of fields of work, problems and technology completely new to him. Although that challenge has been met, the response has sometimes been less than that which was desirable but this has often been due, not to lack of will or interest, but simply because the raising of standards in places of non-industrial employment has been attempted at a time when environmental improvement in many directions has been making demands on inadequate resources, and the difficulties encountered in recruitment by the Factory Inspectorate have been met equally by local government. A factory inspector, fire prevention officer or public health inspector is available only after long periods of training. In the local government field re-organisation should assist materially to ensure that as quickly as possible the shortage of public health inspectors is overcome.

Outworkers

The Factories Act, 1961, section 133, requires that factory occupiers and contractors shall send copies of lists of outworkers, employed in certain classes of work, to the Local Authority in February and August of each year.

Details of the different trades shown in the returns are as follows:—

Trade	Outworkers	
	Inside City	Outside City
Clothing	318	393
Tailoring	20	11
Overalls	14	12
Umbrellas	—	—
Gloves	—	—
Quilts	4	—
Travel bags	16	9
Chamois leather	—	12
Handbags	7	6
Household textiles	19	14
Furriers	5	2
Cartons	4	13
Totals	407	472

The names and addresses of those employed outside the City were notified to the appropriate Local Authorities.

Two hundred and one visits were made to the persons notified to the department as homeworkers. No cases were found of homework being carried on in unwholesome or undesirable premises. In one instance the worker was advised to arrange for improved lighting.

Agricultural (Safety, Health and Welfare Provisions) Act, 1956

Health inspectors continued to visit farms, nurseries, market gardens and small-holdings where persons are employed to ensure that the requirements of the statute were observed.

Construction (Health and Welfare) Regulations, 1966

Fifteen notifications were received of building operations coming within the scope of the above regulations directed to ensure the provision of adequate sanitary accommodation.

Shops Act, 1950 to 1965

Young Persons (Employment) Act, 1938 and 1964

In the enforcement of the various requirements, including those relating to assistants' weekly half-holidays, the employment of young persons, Sunday trading and evening closing, 3,495 visits or observations were made.

Four prosecutions in regard to Sunday trading resulted in fines and costs amounting to £610 being imposed by the Justices.

The number of persons, registered on religious grounds, who wished to trade on Sundays up to 2.00 p.m. subject to their shops being closed each Saturday, increased to 274 compared with 264 in 1972.

Eight certificates were issued, granting conditional exemption from half-day and evening hour closing requirements at exhibitions where retail trading was subsidiary or ancillary to the main purpose of the exhibition.

General Environmental Conditions

Infectious diseases

Public health inspectors investigated 791 notified cases of infectious diseases. The home circumstances of a further 196 cases of infantile gastro-enteritis were investigated jointly with a health visitor.

Port health authorities notified the arrival of 43 persons, from countries where smallpox was endemic, who did not possess valid certificates of vaccination. Each person, after vaccination on arrival, was visited and kept under surveillance for the prescribed period.

Port health authorities also notified the destination addresses of 533 long stay immigrants, this enabled the staff of the department to visit 62 per cent of the immigrants and advise them of the procedure for registering under the National Health Service Act, 1948, to obtain the health services available. Additionally, advice and information was given, where appropriate, on housing and environmental matters especially where long stay immigrants were living in houses in multiple occupation or were engaged in food businesses.

Three aircraft were disinfected at Manchester Airport, using formaldehyde liquid, as a consequence of passengers being suspected cases of smallpox.

Defective drains and sewers

It was necessary to serve 672 notices under the provisions of section 41 of the Manchester Corporation Act 1950, requiring attention, without delay, to stopped-up drains, private sewers, soil-pipes, wastepipes and waterclosets.

At 215 premises the work was executed by approved contractors, in default of the owners complying with the notice and at a further 41 premises the owners requested the Corporation to arrange for the work to be carried out.

At 682 premises, immediate repairs to public sewers were undertaken, on the instructions and under the surveillance of the department in accordance with emergency provisions of section 23 and 24 of the Public Health Act, 1936, (as amended by section 33 of the Manchester Corporation Act, 1946). Defective public sewers at 48 premises were also remedied following the service notice under section 24 of the Public Health Act, 1936.

The investigation of the conditions of the drains believed to be defective took place at 331 premises. In each instance where defective drains were found, appropriate action was taken to secure their repair. The most common causes of these examinations were rat infestations, percolations into basements or sub-floor spaces, recurring stoppages in drains, suspected defects, subsidences, and offensive smells.

Sanitary accommodation

Under various statutory enactments, adequate standards of sanitary accommodation were enforced.

At 15 business premises and 61 dwellings, pail closets were in use and at a further three dwellings privy middens continued to be used. This was a reduction in this anachronistic type of sanitary accommodation from 93 premises to 79. These conditions continue, either because no sewer is available in the vicinity, or the premises have only a short residual life. A newly constructed sewer in the Heyhead area of the City will enable suitable drainage connection to be made to reduce still further the number of obsolete sanitary fittings.

Disposal of refuse

The Director of Cleansing has supplied the following information on the total of 295,721 tons of refuse dealt with by his department which undertakes the municipal collection and disposal of refuse.

		Tons	*Percentage*
Controlled tipping ..	..	283,824	95·98
Sales, manufacturers, etc.	..	3,128	1·06
Refuse handling plant ..	..	8,769	2·96
	1973	295,721	
	1972	264,765	

The Cleansing Department's publicised free household collection and disposal service, including dealing with bulky articles such as unwanted furniture and abandoned motor vehicles, has remained available to the public. Nevertheless, rubbish continued to be dumped on land and in passages, necessitating action by the Health Department to secure its removal.

In 264 instances, formal action was necessary to secure the abatement of nuisance arising from accumulation of offensive matter, frequently deposited in unoccupied premises not secured against unauthorised access.

Surveillance of sites used for tipping continued.

Considerable trouble was experienced during the summer in an area in the south of the City from flies being bred in a large tip and then being windborne into houses in the locality. Although the fly breeding was largely the consequence of insufficient tip cover and inadequate pesticidal treatment the situation was stabilized by the department's advice being implemented at the site and an issue of free insecticidal aerosols to affected houses.

The incidents of complaint from this tip illustrate the difficulties associated with large scale tipping when, in hot weather, much of the refuse arriving for disposal was already infested. The department also became aware of the inadequate cleansing of bulk refuse disposal containers received at the tip from a major food processor and appropriate action was taken to deal with that problem.

For long term maintenance of freedom from nuisance such as windborne paper, fine dust, smells, insect and rodent pests, strict observance of the prescribed methods of controlled tipping and pest control and extermination is of importance.

Deposit of Poisonous Waste Act, 1972

Deposit of Poisonous Waste (Notification of Removal or Deposit) Regulations, 1972

The Deposit of Poisonous Waste Act which came into force on 30th March, 1972, makes it an offence, for which heavy penalties are provided, to deposit on land any poisonous, noxious or polluting waste in circumstances in which it can give rise to an environmental hazard; that is, if waste is deposited in such a manner or quantity as to subject persons or animals to material risk of death, injury or impairment of health or so as to threaten the pollution or contamination of any water supply. In assessing the degree of risk, regard is to be had to any measures taken for minimising the risk and to the likelihood of the waste being tampered with by children or others.

The Act also introduced a notification procedure which requires that local authorities and river authorities are given specific information concerning the amount, nature and chemical composition of any poisonous waste either originating or being deposited in their areas. This notification procedure together with the Deposit of Poisonous Waste (Notification of Removal or Deposit) Regulations, which list the classes of waste exempt from notification procedures, came into force on 3rd August, 1972.

As in the period from August to December 1972, the majority of the notifications received by the department originated from the larger industrial concerns which regularly produce quantities of poisonous waste. None of this material was deposited within the City boundaries, but was transported to other districts where special tipping sites exist that have been approved for the reception of toxic materials.

At the onset much work was involved in obtaining clarification of some of the information given in the notification, but as the firms from which this type of waste originates and the specialist contractors engaged in its removal have become familiar with the requirements of the Act, more detailed information as to the chemical composition of the wastes is being provided.

To ensure that the notification procedures are not being ignored, a survey is being carried out by the department to ascertain the nature of the wastes being produced by the smaller factories from whom no notifications have been received. So far, no contraventions of the Act have been found.

As awareness of the provisions of the Act has become more general, an increasing number of requests have been received from individuals and firms for advice on the disposal of unwanted or obsolete chemicals and other substances of a toxic nature. Where the quantities involved have been small, in order to obviate any risk and to ensure satisfactory disposal, the department has undertaken responsibility for their destruction. This facility has continued to be extended to hospitals, schools and other educational institutions. In implementing this service, the City Analyst, the Rivers Department and Cleansing Department have given the fullest co-operation and assistance. However, despite the publicity afforded to the Act, two incidents which occurred during the year illustrated the potential dangers arising from the irresponsible or careless handling of toxic substances.

Deposit of Poisonous Waste Act, 1972

Notifications of deposits of wastes, received during the period 1st January—31st December, 1973

Classification	January		February		March		April		May		June		July		August		September		October		November		December		Cumulative Total	
	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.	By Wt.	By Vol.
	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls	Tons	Galls
1. Solid																										
a. Cyanide	9¼	—	9¾	—	—	—	—	—	—	4	¼	—	1	—	—	—	—	45	—	—	—	—	3	—	23¼	49
b. Metallic and others ...	380	—	365	—	551	—	615	60	615	—	615	—	603	—	503¼	—	705¼	—	400½	—	431	—	431	—	6,314¾	60
c. Asbestos	200¼	—	181	—	255	—	272	—	260	—	262	—	313	—	260½	—	265½	—	195	—	195½	—	194½	—	2,854¼	—
d. Pharmaceutical	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Solutions and Sludges																										
a. Acid (metallic)	—	14.640	6	7,500	23	6,000	23	15,500	23	—	23	2,000	45	7,235	20	10,500	20	7,300	41	15,000	20½	3,025	20	7,000	264½	95,700
,, (without metal) ...	7	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	½	—	—	—	—	—	8½	—
b. Alkaline (metallic) ...	—	—	—	—	8	—	8	250	8	—	8	—	8	—	8	—	8	1,500	8	1,200	8	—	8	2,000	80	4,950
,, (without metal)	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18¾	—	—	—	50	—	—	—	78¾	—
c. Neutral (inorganic) ...	160	36,070	175	37.720	—	36,000	7	36,000	7	28,000	7	28,000	44	37,560	41	—	36	—	20	—	354	8,000	20	8,000	871	255,350
,, (organic) ...	½	1,145	½	329	99	—	100	—	100	110	121	110	71	1,938	68	—	58¼	—	171¼	200	—	245	161	855	950½	4,932
,, (mixed)	113	—	119	2,000	45	8,000	45	8,000	45	—	45	—	49	—	45	8,400	67	8,000	67	120	—	—	67	—	707	34,520
3. Oily Wastes																										
a. Mineral	—	3,150	—	225	—	—	—	9,400	—	580	—	1,000	—	1,150	—	700	—	880	—	400	—	—	—	500	—	17,985
b. Fatty	5	—	—	—	—	816	—	—	—	200	—	—	—	100	—	—	—	—	—	—	—	—	—	—	5	1,116
c. Oil/Water emulsions ...	—	660	—	660	—	5,000	—	2,400	—	8,000	—	15,000	—	—	—	2,500	—	—	—	1,000	—	—	—	600	—	35,820
4. Tarry Wastes	1	—	1	2,655	13	—	—	5,000	5	5,000	13½	—	9	—	—	—	8½	270	10	—	—	4,525	—	—	61	17,450
5. Solvents																										
a. Combustible	—	2,647	—	3,860	—	3,000	—	3,000	—	7,250	—	440	—	6,350	—	3,600	—	700	—	2,931	—	—	—	550	—	34,328
b. Non-combustible ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	886	58,312	858¼	54,949	994	58,816	1,070	79,610	1,063	49,144	1,094¾	46,550	1,143	54,333	1,045½	25,700	1,187¼	18,695	913¼	20,851	1,059	15,795	904½	19,505	12,218½	502,260

Summary of proceedings before Justices

Infringements	Number of summonses	Number dismissed	Number withdrawn	Convictions	Abatement orders made	Penalties £	Costs £
Housing conditions (Public Health Acts and Housing Acts)	110	20	24	57	9	1,443	191
Food : standards	16	1	—	15	—	205	140
Food : hygiene	88	3	4	81	—	540	66
Occupational hygiene.. . ..	14	1	—	13	—	110	27
Clean air	30	1	1	28	—	485	118
Noise	2	—	1	—	1	—	—
Dust	2	—	—	2	—	30	—
Shops : Sunday trading, evening closing hours	4	—	—	4	—	500	110
Totals	266	26	30	200	10	3,313	652
						3,965	

In one case, the police reported finding on the carriageway a sack of material which had apparently fallen from a vehicle. The substance which was toxic was identified as a chemical having a limited and special use in the glass industry and although the quantity was such as to be of considerable commercial value, it was not subsequently claimed. From markings on the sack, it was possible to identify the country of origin and the manufacturer. Details of the importers were obtained through the Consulate of that country, but further exhaustive enquiries failed to produce conclusive evidence as to the carrier of the material, which was subsequently destroyed.

In a second case, a member of the public handed to the police a tin marked "CYANIDE" which he had found in a street near the city centre. The tin contained a quantity of powder which on examination was found to be potassium cyanide. The tin bore no other marks or identification and the person abandoning it could not be traced. The tin and its contents were treated by chemical means so as to make them inoccuous.

Rodent Control

The Prevention of Damage by Pests Act, 1949, requires the local authority to ensure as far as practicable that the district is kept free from rats and mice. At the present time the department employs one technical assistant and eight rodent operators under the general guidance of public health inspectors, but the service has been seriously handicapped by a high level of sickness amongst the operators. At the present time the staffing of the service is undergoing re-organisation to remedy weaknesses and in conjunction with the Town Clerk's management services section it is hoped to improve the service. All phases of the work of rodent control are dealt with by the department with the exception of sewers situate under carriageways which are treated by the City Engineers and Surveyors' Department. During the year the activities of the section have mainly been to attend to complaints made to the department by owners or occupiers of all types of premises including land who report the presence or sighting of rodents in or about their premises. Every complaint relating to rat or mouse infestation is investigated, rat infestations being the subject, where possible of an initial visit and treatment within 24 hours. In all cases an inspection of the premises and sometimes the adjoining premises is made so that the degree and sources of infestation may be obtained. Naturally, some complaints are of a trivial nature and others most unusual—a telephoned complaint from a very distressed lady and confirmed by a male neighbour that the cat had brought into the back garden ''the biggest rat ever seen'', within an hour it was seen by an officer who failed to placate them when he informed them the ''biggest rat'' was in fact a fully grown hare! Paradoxically the relief shown by a butcher who sought advice regarding the large amount of ''rat droppings'' in his waste storage shed when informed the ''droppings'' were the pupal stage of ''blue bottles''!!

Mice infestation

These are a major problem and it is this field that prevention is the best cure. Proofing of premises ought to be normal practice yet the importance of this is not fully appreciated by the construction industry be it in new developments or the repair and maintenance of existing and older buildings. A certain amount of success has been achieved in the multi storied flats in the City where proofing of individual flats has been carried out by the Direct Works Department under the supervision of the Health Department staff, compartmenting the premises thus facilitating the eradication of the pests and reducing to a minimum re-infestation. Even the need for this operation is not fully understood by the workmen so engaged, who cannot appreciate that a gap or hole of less than ½ inch diameter is sufficient to admit the "wee beasties". A fair degree of control of infestations is obtained by the use of rodenticide mainly of the multi dose (chronic) and occasionally single dose (acute) (under safe conditions) poisons and break back traps coupled with the skill and practical experience of the operators. The most recently developed rodenticide—Sorexa C.R. which is a solution of calciferal (Vitamin D) in corn oil and warfarin with a canary seed base is now being used against mice as an alternative to the acute poisons when anti-coagulant resistance is evident.

Rat infestations

Surface infestations by rats do not present the difficulties posed by mice regarding eradication, control and the tracing of the sources of infestation, nevertheless great alarm and fear is obviously felt by the majority of complainants of the presence of these rodents. The majority of surface infestation outbreaks are traced to sewers and drains which have been left open to the surface during construction work, and to defective conditions of underground conduits, which permit egress of rats from the sewers. The City Engineer and Surveyors Department is to increase the number of personnel engaged on the destruction of rats in this habitat and the Health Department will continue to co-operate with them in this very important aspect of rodent control. The number of sewer access chambers in the City is 17,000 and the number treated with fluoracetamide with a mould inhibitor was 7,200.

Successful eradication of surface rats is being attained by the use of anti-coagulant rodenticides coupled with proofing and pipe repair work.

The treatment service for dealing with rodents in dwelling houses is free, but is chargeable usually on the basis of materials and labour used for industrial, commercial or similar premises which amounted to approximately £3,000 for the year. This service when manned as is envisaged could earn considerable revenue.

During the year 7,318 initial inspections were made following notifications, the presence of rats was confirmed in 2,697 instances. These were all minor infestations with six exceptions. Cases of confirmed mice infestations numbered 4,421.

Disinfestation

Insects

Attention has again been focussed upon the problems of controlling pests within the City. The department is responsible for rodent control except in sewers, the control of other pests and for giving advice on the control of insect infestations. The Housing Department organises insect disinfestation in dwellings owned by the Corporation.

Serious problems of insect and mice infestations have been encountered in newly constructed buildings where defects in design and construction have resulted in the creation of places of shelter for pests and means whereby they could migrate from dwelling to dwelling or avenues of escape when attacked by disinfestors. Additionally, higher heating standards have made such premises even more attractive residents for pests. Extensive proofing and disinfestation activities have been necessary.

The absence of an insect disinfestation service for the private sector needs to be rectified and it is hoped that a new comprehensive disinfestation service will be created.

The Entomologist and his assistant at the University of Manchester have been most helpful in confirming the identification of some of the unusual insect pests brought to the department.

Feral pigeons and other birds

The department continued to deal with complaints arising from the presence of starlings and pigeons in various parts of the City. Information on the elimination of such infestation was made available to the owners of the properties concerned, but in the absence of the availability of suitable labour the department was unable to undertake any practical work.

The effective reduction of pigeon flock density will only be achieved when the feeding of the birds by the public is controlled and action is taken to deny the birds nesting sites.

The department continued to be licensed by the Ministry of Agriculture, Fisheries and Food to use stupefying baits to take feral pigeons.

Dogs

A Corporation Byelaw made in 1940 requires persons in charge of a dog not to permit it to foul the pavement. The department continued to seek the co-operation of dog owners in keeping the streets free from this nuisance by directing their attention to the byelaw by means of a note printed on the dog licence reminder cards sent annually to licence holders. This appeal does not, of course, reach the owners of unlicensed dogs nor is the byelaw applicable to offending dogs unaccompanied by their owners.

Although the byelaw is consistent with public opinion it does not provide an effective deterrent. Over a period of several years the department has become aware of an increasing public concern in respect of this form of nuisance and in the apparent increase in the number of stray dogs which is especially prevalent in the newer housing estates. In the autumn of 1973 the Health Committee approved the establishment of a dog warden service for the apprehension of stray dogs and the enforcement of the byelaw. By the end of the year, however, it had not been possible to recruit a suitable person although it was anticipated that the warden would be in post by early 1974. At the time of writing, the dog warden is carrying out his duties.

The establishment of this service will require the closest collaboration between the department, the Police and animal welfare organisations.

Offensive trades and effluvium nuisances

The number of offensive trades registered, for a limited period in accordance with section 107 of the Public Health Act, 1936, and in operation at the end of the year remained at six. There are also nine other designated offensive trades which by reason of their long-standing are not required to seek periodic renewal of registration. The conduct of all these businesses is subject to action under the provisions of the Public Health Act, 1936, if the need arises, but this was not necessary.

Eleven works in the City are registered under the Alkali etc. Works Regulations Act, 1906. These are under the control of H.M. Alkali and Clean Air Inspectorate with whom a close liaison is maintained.

Special surveillance continued in a mixed industrial and residential area where several of the foregoing works are situated and ensured that any temporary emission of offensive vapours, caused by mechanical failures within the works, can be detected and remedied as quickly as possible.

Complaints of effluvium nuisance from other sources were investigated and resolved without the need to take formal action.

Reduction of dust from building operations

In a year which was notable for much publicised environmental improvement involving the cleaning of many public buildings and churches under ''operation Eyesore'', action by the department was necessary in several cases under the provisions of the Manchester Corporation (General Powers) Act, 1971 where nuisance was being caused to adjoining occupiers and pedestrians from grit used in sandblasting the stonework.

Notices were served upon contractors to properly screen the cleaning operations and in one case a successful prosecution followed a contractor's non-compliance with the caution issued.

Several cases were also dealt with of dust emissions caused by the many demolitions of buildings in the City and remedial measures enforced.

Noise

Noise has become increasingly recognised as an unjustifiable interference with ordinary comfort and the number of complaints about it is increasing at the rate of about 10 per cent each year. Correspondingly the noise control work carried out by the department has increased considerably in value and complexity over the last decade.

The worst source of general noise is road traffic; and near the airport the worst source of noise is aircraft (a grant aided scheme for sound insulation of dwellings affected by aircraft noise is already in operation).

The next worst—and the source of most complaints—is noise affecting dwellings. This arises most commonly from industrial and commercial sources, which in some cases are ''cheek by jowl'' with houses so that some noise is inevitable. Standards of expectancy have risen and continue to do so; and what would previously have been accepted as an unavoidable inconvenience now gives rise to complaints. Each case has to de dealt with on its merits.

Noise nuisance is a matter of degree, with considerable variation in the noise source, the individual idiosyncrasy of the hearer, and the attenuation between them due to distance or noise ''barriers''. The assessment of nuisance is a subjective matter but the measurement of the noise is usually necessary as a precursor to remedial action in those cases where the source is ''industrial'' (e.g. fans or machinery); either to establish the source of the noise by means of octave band analysis or to serve as an objective memory of ''before and after'' conditions.

The remedies for noise have become more complicated as the scope of the relevant legislation has widened. Earlier control was effected by action under local bye-laws which referred to such matters as Street Cries, 1890; Street Cries on Sunday, 1899; Noisy Animals 1911; Loud Speakers and Touting in Streets, 1932; and Loud Speakers, 1944. The Manchester Corporation Act, 1946, included powers to enable the Corporation to deal with noise as a ''statutory nuisance'', and more recently the Manchester Corporation (General Powers) Act, 1971, included powers (in advance of national legislation) to control certain kinds of machinery and building construction site noise.

The Noise Abatement Act, 1960, is the main basis for action at the present time. As a necessarily cautious first venture into the field of general legislation on neighbourhood noise it extended to noise the well established concept of ''statutory nuisance'' with some minor adaptation of accepted procedures. Within its limits—i.e. reacting to complaints about noise nuisance—it has worked reasonably well; although in this department's experience the subject is bedevilled by more frustration and acrimary than any other type of nuisance and involves a disproportionate amount of time, and of work at unconventional hours.

The tenor of legislation is changing from ''a punitive measure to deter offenders''—to—''prevention being better than cure'', and new controls in the Land Compensation Act, 1973, and in the Protection of the Environment Bill (now before Parliament), add considerably to the noise control duties of local authorities, and require the use of more sophisticated measurement tools and methods.

Sound level measurement is a complicated exercise with sophisticated equipment which has to be carried out in accordance with prescribed principles and in suitable conditions if the results are to be accepted as objectively valid. The department already possesses precision grade equipment, and is proficient at using it, but it will need to be supplemented by additional equipment to enable the new duties to be carried out correctly.

The Protection of the Environment Bill includes provisions for the preparation of a noise level register and for the establishment of noise abatement zones; these duties which—if the Bill is enacted—will impose a very considerable amount of work will nevertheless provide a good basis for a systematic attack on the general noise problem. Because of the complexity of the subject and the multiplicity of sources it is anticipated that the establishment of noise abatement zones will be even more difficult than the establishment of smoke control areas has been (and that has been difficult enough) but the department looks forward to the challenge and opportunity which the new powers and duties present.

Noise and industrial sources

Year	Number of Jobs	No. of Complaints and petitions	No. of visits
1971	7	21	47
1972	17	50	140
1973	37	63	207

The range of noise sources concerned in the above table is too wide to permit a simple summary of causes except that they all emanate from machinery of one sort or another. Several traffic noise surveys and environmental surveys of particular development sites have been completed in the year.

Complaints of noise have included noise of beat groups rehearsing, repairing motor vehicles in the street, commercial sewing machines in private houses to engineering constructional appliances in the City centre of which the latter formed the highest percentage.

Sections 36, 37 and 38 of the Manchester Corporation (General Powers) Act 1971 again proved useful in dealing with most of the complaints in connection with demolition and road works. The absence of efficient silencers and proper mufflers from compressor and drill units has been noticed in connection with public undertakers. In this regard proof was easily furnished to the two Boards concerned by photographs. Immediate action was taken by the sub-contractors to replace the equipment.

Noise from an electric substation was the subject of a frequent analysis and later precautions eliminated further complaint.

The nuisance from car repairs occurred in a street on the fringe of a clearance area. Work commenced after midnight till about 4 a.m. In conjunction with the Town Planning and Building Department this was stopped and subsequently the complainants were all rehoused.

Summing up it is anticipated that because of city centre developments more complaints will arise in 1974.

Fair Grounds

An agreement has existed for many years between the Showmen's Guild and the Corporation in respect of the use of land for pleasure fairs. It is directed to ensure that an adequate water supply is available, satisfactory sanitary accommodation provided, vehicles, equipment amplifiers are sited to avoid nuisance to persons living in the neighbourhood and the land left in a clean condition.

Nine pleasure fairs were authorised on approved sites within Corporation parks and subjected to surveillance by health inspectors. Infringements by stall-holders of the requirements of the Food Hygiene (Markets, Stalls and Delivery Vehicles) Regulations were dealt with informally.

Amusement Parks

Amusement parks are not themselves subject to control under the Offices, Shops and Railway Premises Act but accommodation such as bookings or administration offices are and employees working therein are protected by the provisions of the Act and regulations. Food and Drugs legislation is applicable with regard to food safety and quality while the Public Health Acts contain provisions relating to sanitary accommodation.

The safety of equipment used at such places for entertaining the public and the safety of employees working with such appliances is inadequately controlled by existing legislation and in view of the accident records this deficiency should be remedied and is clearly a topic requiring national and not local legislation.

The attention of the department was drawn by an insurance company to defects found on a permanent scenic railway. A public health inspector inspected the equipment and verifies that the required remedial work had been satisfactorily executed. The City Architect also has important functions with regard to the safety of this type of equipment.

Although there have not yet been any applications for permission to hold ''pop festivals'' in the City there are some open sites which could conceivably be so used. Accordingly the department welcomes the publication by the Department of the Environment the Report and Code of Practice by the Advisory Committee on Pop Festivals which is a guide to the satisfactory management of such functions which, although subject to the requirements of other services, clearly have a very great environmental health interest.

Rag flock and other filling materials

In the upholstery business in the City the trend appears to be for rubber or synthetic foam to replace rag flock, cotton felt, coir fibre and Algerian fibre as filling materials, and also for synthetic fabrics to be used instead of the more conventional coverings for suites. In the manufacture of mattresses there has been an increase in the use of pre-cut woollen mixture felt pads, cut to mattress sizes in lieu of rag flock fillings. In the manufacture of quilts there has been an increase in the use of synthetic fillings in lieu of cotton felt fillings.

Premises which were used for the manufacture of furniture are now mainly used for repair work, and several smaller businesses have closed.

Twenty-one premises, compared with 22 in 1972, were registered under the Rag Flock and Other Filling Materials Act, 1951, and subsequent regulations for the use of designated filling materials in the manufacture of upholstery (9), quilts (9), bedding (2) and pillows (1). The reduction was due to one premises being demolished.

No rag flock is now manufactured in the City, but two premises were licensed for the storage of rag flock prior to distribution to manufacturers.

Seventeen visits were made regarding the enforcement of the Regulations—14 to registered premises and three to licensed premises. Eleven samples of designated filling materials were obtained and submitted to the prescribed analyst for examination. These samples comprised cotton felt, rag flock, woollen felt, Algerian fibre, washed flock layered and bedding flock; all were found to satisfy the relevant standards contained in the Rag Flock and Other Filling Materials Regulations 1971.

Consumer Protection Act, 1961

Toys (Safety) Regulations, 1967

These prohibit the sale of toys (other than table tennis balls) made of cellulose nitrate which is dangerously inflammable and also prescribe the maximum permissible amount of lead, arsenic and chromium in any paint used on toys.

Since the inception of the Regulations, the use of celluloid has greatly declined. It has been replaced by various types of multi-coloured plastics and the use of such materials has resulted in a reduction in materials which require painting.

Toys of British manufacture are generally of satisfactory quality and comply with the Regulations. Any problems which now arise usually involve imported toys from places such as Hong Kong, China and Eastern Europe. In such cases, action is usually based on information received either from another local authority, because a suspect toy has been bought from a City wholesaler, or from the Home Office. Such occurrences usually arise near Christmas when there is a much greater activity in the toy market. Consequently, little can be done as, by the time the wholesaler or retailer is traced, the toys have been sold. Often wholesalers have no record of the purchasers as this is a field of trade in which "cash and carry" wholesaleing is expanding.

During the year, routine visits were made to shops and market stalls; sampling was carried out, but no action was necessary to enforce the regulations.

An interesting case which came to light was that of a young child admitted to hospital with lead poisoning. Investigation revealed that the child was in the habit of consuming coloured crayons. Samples of various crayons were obtained from local shops and analysis by the Public Analyst revealed varying quantities of lead in harmless quantities, unless consumed regularly. The child has recovered and efforts are being made to prevent him from consuming crayons.

Consumer Protection Act, 1961

Nightdress (Safety) Regulations, 1967

These regulations impose requirements in relation to nightdresses, and accordingly under the Act, subject to certain exceptions, no person may sell or have in his possession for sale a nightdress not complying with the regulations.

Visits were made to shops and market stalls to ensure observance of the Regulations, and it is evident that since the inception of the Regulations, manufacturers and retailers have become familiar with the requirements, stitched-in labels being used in appropriate cases to warn against fire hazard. However, the growth in the use of synthetic materials which melt with the application of heat or have low flammability has led to a decrease in action in this field.

Export of washed rags and second-hand clothing

There was a reduction in the number of requests for certificates of disinfection in connection with second-hand clothing to be sent abroad. Only one certificate was issued in relation to 11 articles, which were disinfected by steam under pressure and then sent to Spain.

Four health certificates were issued in connection with the export of washed rags, mainly to Portugal.

Swimming baths

Forty-six swimming baths were in use, all being supplied with mains water and all were equipped with continuous filtration plant having a "turn over" period of approximately four hours or less, dependent on bathing loads.

Fifteen baths were at schools or colleges and another five were privately owned. Two privately owned swimming baths were not in use, but could be re-opened. The remaining twenty-six baths, housed in sixteen buildings, belonged to the City's Baths and Laundries Department.

Alumina ferric or alum are used as coagulants in the treatment plants and an alkalinity of PH7 to 8 is maintained by using soda ash. Filtration of the bath water is by means of rapid (gravity) sand filters, pressure sand filters or diatomaceous earth pressure filters. Sterilisation of the bath water is secured at all baths by the use of chlorine.

The baths were visited when in use, inspected, and "on the spot" tests for alkalinity and free residual chlorine content of the water carried out.

Samples of the water were also taken to the Public Health Laboratory for bacteriological examination and only four of the 50 samples examined by a 24 hour plate count proved to be unsatisfactory. Three baths were involved in these failures and following recommended plant attention at two of them repeat samples were satisfactory. The third bath was closed for major alterations to the plant.

The failure of an occasional sample to comply with the recommended standard does not necessarily indicate that the swimming bath water is dangerous. It usually occurs as a result of a minor failure in the plant or of an error in its correct operation and can easily be rectified.

The same usually applies if a bath water fails the recommended standards for alkalinity and free residual chlorine content.

Watercourses

Statutory responsibility for watercourses in the City rests with the Mersey and Weaver River Authority, but the Rivers Department and the Health Department maintain a surveillance for rodent infestations and for the pollution of watercourses and canals.

The functions of the Rivers Department relating to the clearance of minor watercourses in the City area is to be transferred to the Highways Department of the Manchester District Council.

Following storms the department continued to assist householders in the cleansing and disinfection of sub-floor cavities.

Rochdale Canal

Following the Corporation's action in landscaping part of the Rochdale Canal and making it safe for young children to use as a paddling pool in warm weather, the department, as a precautionary measure, continued to keep the area under surveillance and to take samples of the water for chemical and bacteriological analysis.

Eight chemical and eight bacteriological samples were taken. The chemical analyses indicated that the water could be classified as being in a clean condition, judged by the standard classification for river water. Bacteriological standards were also found to be satisfactory for a water of this category.

Hairdresser's premises

There are 730 ladies and gentlemen's hairdressing businesses on the register, a small proportion being combined. During the year, seven new registrations were effected and 19 registrations were cancelled.

Premises inspected were, with nine exceptions, found to be satisfactory.

Establishments for massage or special treatment

The annual licensing of establishments for massage or special treatment is in accordance with the provisions of Part IX of the Manchester Corporation Act, 1924 and byelaws; licences were issued in respect of 55 establishments as follows:—chiropody (31), physiotherapy (5), massage chiropody and electrical treatment (3), sauna, sunlamp and infra-red (1), sun-ray and high frequency (1), sauna and "toning-up" body massage (1), massage, electrical treatment, light baths and exercises (1), sauna and massage and low output electrical and sun-ray (1), massage, manicure, chiropody and electrical treatment (1), massage and chiropody (1), physiotherapy including massage, radiant heat, ultra-violet and exercises (1), "Hawkins current" low frequency electrical treatment to assist women to lose weight—electrical treatment (1), manicure, chiropody and electrical treatment (1), massage (non-medical)—"keep-fit"—sauna, steam bath and sunray (1), massage remedial exercises and infra-red lamp and chiropody (1), massage, steam bath and beauty treatment (1), steam bath and massage connected with beauty treatment (1), sauna bath with sun-ray and exercise facilities (1), sauna baths—"keep-fit" massage with ultra violet and infra red lamps (1).

When considering applications for the licensing of establishments affording treatments defined in the Act, consideration is given to both professional, or technical qualifications and the experience of the person, or persons, giving treatment, and to the suitability of the premises.

An interesting feature of the year in connection with massage, was the establishment of four businesses offering "relaxing massage for men", presumably as a result of the apparent growth of such ventures in London. The businesses were established in run-down buildings in the City and employed young, unqualified girls to carry out the massage. Also available in these establishments were "assisted showers", sun-lamp treatment and, in two of them, sauna baths.

The first of these businesses was in unsatisfactory premises and the staff were unqualified—as a result of pressure by this department it closed. A second opened, again in unsatisfactory premises with unqualified staff. A licence was applied for, but refused by the Health Committee and City Council. Appeal proceedings were instituted by the applicant, but eventually she declined to proceed and closed the business. However, she started another similar venture elsewhere in the City and this, together with another business which was established by another person, were still the subject of the department's attention at the end of the year.

A further interesting point was the growing number of enquiries from people about the opening of massage and sauna-bath establishments in the City.

An application for a licence to re-open turkish baths at premises where the previous licence was revoked in 1971 on account of improper conduct was refused.

The majority of establishments licensed annually by the Corporation have been in practice in the City for many years. Sixty visits were made in connection with them and those to licensed premises confirmed that satisfactory standards of hygiene and management were being maintained.

Sale of certain poisons

There was a further reduction in the number of persons, 286 compared with 333 in the previous year, listed with the department for the sale of poisons specified in Part II of the Poisons list under the Pharmacy and Poisons Act, 1933.

Informal action was taken to deal with infringements of the labelling, packaging or storage requirements or of the keeping of records.

Burial grounds and exhumations

The department supervised only one exhumation to ensure the observance of due care and decency and the prevention of any risk to health, as required by the terms of the necessary Home Office Licence issued under section 25 of the Burial Act, 1857. The remains were reinterred in a new family grave in another cemetery in the City.

Three certificates were issued by the department for the export of three bodies. These were in the form required by Cyprus, Italy and Poland, the countries to which the bodies were sent. All three certificates related to the City's freedom from any serious infectious disease, while two of them also certified that the sealing of the zinc lined coffins had been supervised by the department so as to ensure that there was no risk to health in transit. Not all countries require this particular certification.

During the year considerable consultation and planning was carried out with British Rail and other Corporation departments in connection with the exhumation of remains from the crypt which still remains at the site of the old St. Peter's Church in St. Peter's Square. This is in anticipation of the construction of an underground railway which is planned to run through the Square. Similar planning and consultation with other Corporation departments was carried out in relation to the exhumation of the remains from the disused St. John's burial ground, Byrom Street, an area which is due for redevelopment. In the former case the exhumation of 94 bodies is planned and in the latter the remains of 3,000–7,000 persons are to be removed.

Public conveniences

Restrictions on capital expenditure continued to affect the building programme. New conveniences were provided at the Beswick district centre and unsatisfactory and worn out accommodation was replaced at Crumpsall and Clayton.

Plans have been prepared to provide new conveniences as and when money becomes available, in the following situations:

Market Place, City centre
Market Street North, Arndale Development, City centre
Gorton district centre
Longsight (Everton Road) Neighbourhood centre
Longsight district centre
Harpurhey district centre
Heaton Park, jointly with the Parks department
Miles Platting, Varley Street neighbourhood centre.

Additionally detailed plans were agreed to provide replacement conveniences in Albert Square and a new convenience in St. Peters Square in association with the proposed Piccadilly underground railway.

In all these schemes the needs of disabled persons have been considered.

A self-financing productivity bonus scheme continued to raise the level of take home pay for the 90 attendants, drivers and cleaners engaged in this unattractive work and assisted in the retention and recruitment of staff.

The number of incidents of damage and misuse declined but in a few cases damage of a serious nature occurred involving the department in higher repair costs than usual and loss of the service to the public for longer periods.

With a few exceptions, conveniences are open at all times and are provided with free hand washing facilities but the extent to which it was possible to make available, hot water, soap and paper towels in the absence of attendants, remained limited by misuse.

The number of public conveniences is now as follows:

	Men	*Women*	*Total*
Conveniences	67	62	129
Urinals only	35	—	35
			164

Submission of plans: Building Regulations 1972

Two hundred and nine plans were forwarded by the City Architect and were examined by the district and specialist inspectors in relation to their particular interest. This ensured that the various aspects of environmental health and occupational hygiene were covered in relation to proposed works, so that any omission or potential contravention could be rectified before work was completed. When appropriate, the attention of developers was directed to the requirements of the Chronically, Sick and Disabled Persons Act, 1970, with regard to the provision of special watercloset compartments and the need for easy access thereto for disabled persons.

Overseas Visitors

The department continued to receive visitors from foreign countries on tours of inspection of British methods at the invitation of the Department of Trade and Industry including a high ranking Trade delegation from the Peoples Republic of China.

Sewerage and Sewage Disposal

Sewerage

The City Engineer and Surveyor who is responsible for the provision and maintenance of the sewerage system of the City has supplied the following information:—

The reconstruction of the sewer in Crescent Road is now complete. The construction of a new sewer in Sackville Street to permit the use of large scale commercial development on adjacent land is now complete.

Construction is now nearing completion on a series of sewers in the Moston area of the City. These sewers are intended to rationalise the drainage of nearby redevelopment areas.

Trade Delegation from the People's Republic of China visiting the Health Department.

Work is now complete on the diversion of a 5 ft. dia. main sewer in Collyhurst Road just south of Smedley Road. The sewer had been affected by mining subsidence and the cost of the work was borne by the National Coal Board.

Work is now in progress on the construction of a new sewer in Wavell Road and Hale Top, Wythenshawe Civic Centre. These sewers are required to enable development to be completed.

Tenders have been invited for the construction of a new main sewer to replace the existing "J" intercepting sewer between Dean Lane and Moston Lane East. The new sewer will cater for the drainage from South Chadderton by means of a connecting sewer to be laid along Broadway. A reduction in the pollution of the Moston Brook should also result.

Main drainage work 6 which will relieve pollution and flooding in the Openshaw and Bradford Districts of the City has been completed to schedule.

The construction of the storm sewage overflow from the main sewer in Barlow Moor Road and its associated pumping station is now nearing completion. The re-routing of sewage received from Cheadle and Gatley U.D.C. is expected to be achieved early in 1974.

The construction of the Platt Brook culvert is now complete and the former allotment site is now being developed for housing purposes. The construction of the Moston Brook culvert and the replacement of the "J" intercepting sewer is now complete between Church Lane and Monsall Road. The controlled tipping of domestic refuse is now taking place in the valley.

The construction of approximately two miles of main sewer in Moston Lane between Rochdale Road and Victoria Avenue is now well advanced and when completed should eliminate flooding which has affected Moston Lane for many years.

The design of a new sewer along Bury New Road and Great Ducie Street to replace the existing "G" intercepting sewer is now nearing completion. The design of the new sewer incorporates an underground Archimedian screw pumping station and a storm sewage overflow to the River Irwell. Several existing storm sewage overflows could be eliminated.

On 1st April, 1974 the North West Water Authority will assume the responsibility for the provision and maintenance of the sewerage system of the City under the Water Act, 1973. However, under an agreement dated 12th February, 1974 the discharge of these sewerage functions has been delegated to the Manchester District Council, and the City Engineer could thus continue to be responsible for these works. The future programme of work will thus depend on the finance which the North West Water Authority can make available.

Sewage, treatment and disposal

The Acting Director of the Rivers Department, which undertakes the treatment and disposal of sewage, including a large volume of trade effluent from the City and certain adjacent districts, has supplied the following information:—

"The principal sewage treatment plant for Greater Manchester is at Davyhulme in the Urban District of Urmston. The works deals with domestic sewage from approximately 800,000 inhabitants of Manchester and 13 neighbouring local authorities. However, such is the degree of industrialisation of the area, that, due to the liquid process wastes from industrial premises, the pollutional loading on the treatment plant is equivalent to that from a population exceeding 2 million persons.

As the treated effluent constitutes some 40 per cent of the dry weather flow in the Manchester Ship Canal at Barton, a high standard of sewage treatment is required. Although major extensions were only completed in 1966, increased loading, mainly from industrial sources, necessitated further extensions to provide additional sedimentation, biological oxidation and sludge treatment facilities. These were commissioned at the end of 1972, and doubled the treatment capacity of the works.

The separated sludge is taken to sea in specially constructed ships and deposited in deep water in the Irish Sea. This service has been extended to several neighbouring authorities who joined with Manchester to set up a Sludge Disposal Consortium, constructing a further 3,000-tonne ship operated by the Rivers Department on their behalf. This consortium also engaged consultants to investigate the feasibility of a sludge pipeline scheme to serve 3·5 million people in the North West, using the Manchester fleet to convey the sludge to the designated spoil ground. Concurrently, the Department of the Environment had set up an independent working party to investigate the long-term effect of sludge disposal in Liverpool Bay. Their report, which was generally favourable, was published by H.M.S.O. under the title "Out of Sight, Out of Mind".

By the provisions of the Water Act 1973, the functions of the Manchester Rivers Department relating to sewerage, sewage treatment and disposal, and industrial effluent treatment and control, are to be transferred to the North West Water Authority. For the purpose of administering these functions, the Water Authority has divided its Region into eleven Effluent Treatment Units. The Middle Mersey Effluent Treatment Unit includes the whole of the Manchester Metropolitan District Council area and parts of the areas of the following adjacent Metropolitan District Councils (in alphabetical order):

Bury
Manchester
Oldham
Rochdale
Salford
Stockport
Tameside
Trafford

The maintenance of the sewerage system is to be carried out locally on an agreed agency basis by the District Councils in whose areas the sewer reticulations are situated".

REPORT OF THE PUBLIC ANALYST

J. B. Aldred, M.A., M.Chem.A., F.R.I.C., F.I.F.S.T.

One of the changes to be brought about by the Local Government Act 1972, will be to transfer the services provided by the Public Analyst's Laboratory to the new Metropolitan County Council. It is perhaps therefore, worth noting in passing that the City has had a public analyst for just one hundred years. Although various measures had been in force to control food adulteration for a very long time, it was not until the middle of the last century that the population at large were made aware, by various publications, of the extent of adulteration at that time and the dangers associated with it. The Adulteration of Food and Drink Act, 1860, laid the foundation stone on which all future legislation has been based. To a large extent the provisions of this Act were never enforced and it was not until the Adulteration of Food and Drugs Act 1872, was passed that things began to move. This Act gave certain local authorities specific duties including the requirement to appoint "one or more persons possessing competent medical, chemical and microscopical knowledge as analysts".

The first public analyst appointed by the City was Charles Estcourt, F.C.S., who was appointed during 1873, at a salary of £150 per annum, "upon the understanding that the fees which hereafter may be determined to be charged for any analyses made shall be paid to the credit of the Borough Fund; and further that any gentleman appointed shall be at liberty to carry on his private practice or business and not be debarred from filling any other similar appointment". The fees mentioned were to be charged for samples submitted by purchasers. They were fixed at two shillings and six pence for articles not intended for re-sale and ten shillings and sixpence for articles that were intended for re-sale. At the present time a purchaser who has a bona fide complaint about any food can now seek the assistance of the public health inspectors, who will arrange for an analysis to be made where appropriate, free of charge.

The first two samples examined by Mr. Estcourt, were a sample of rum and one of port wine. Both samples were genuine although the first was alleged to have caused serious illness. Also examined in the first three months were 40 samples of tea submitted by commercial organisations. A number of these were adulterated, one containing 10 per cent of mineral impurity. Adulterants found included sand, magnetic iron oxide, plumbago, Prussian blue (ferric ferrocyanide) and soapstone. In his second quarterly report Charles Estcourt recorded receiving a sample of milk which contained 35 per cent of added water. Alcoholic drinks, especially spirits, still crop up regularly in the lists of adulterated samples published by public analysts; indeed this laboratory analysed a sample of rum which contained 41 per cent of added water during 1973. Watered milks are also still encountered. Modern techniques enable the degree of watering to be determined with considerable accuracy whatever the quality of milk given by the cow, but nowadays it is rare to find more than 10 per cent of added water. On the other hand, adulterated tea is now virtually unknown.

Charles Estcourt continued as public analyst until 1920 when he was succeeded by Harri Heap. Whereas the first public analyst was permitted to carry on a private practice and presumably maintained his own laboratory, Harri Heap had a salaried staff paid by the City Council. The laboratory was situated within the university and the public analyst himself combined the appointments of public analyst and university lecturer. The third public analyst was A. N. Leather, who was appointed in 1949. At about the same time the laboratory moved out of the university into a nearby house. Mr. Leather was the first public analyst to devote the whole of his time to his official appointment. For the first time the laboratory was run entirely for the Corporation and had no connection with any outside body. However, it is extremely difficult to make satisfactory laboratory accommodation out of a converted house and several attempts were made in the years that followed to find alternative accommodation. Eventually the decision was made to build a new laboratory but due to circumstances beyond the control of the Health Department this could not be done before Mr. Leather's retirement in 1967 and the present public analyst was appointed. The present laboratory was occupied in 1972 and gave the City facilities which are amongst the best in the country.

The last hundred years therefore have seen the steady development of the service from one which only occupied part of the analyst's time to that provided by a full time staff of specialist chemists. The early analysts were largely concerned with relatively crude adulteration and techniques had not been developed to detect many of the minor additions which can occur. Today, except in a few fields, gross adulteration is rare but by contrast the composition of many compound foods such as meat products, is laid down by Regulations. Some manufacturers work very close to the minimum limits and analyses have to be made with the greatest possible accuracy in order to avoid the possibility of incorrectly reporting a sample to be deficient in some constituent. As with present day analysts the early analysts were concerned with contamination with toxic metals, such as lead. However, in the early days the main concern was for foods which were positively dangerous in themselves due to gross adulteration and some horrifying findings were recorded. Today there is increasing awareness that minute traces of many substances can accumulate in the body over a period of time, to give rise to symptoms of poisoning, months or even years later. The emphasis is not on whether the food is dangerous, but whether it would be dangerous if eaten over a period of time, together with other food items that may be similarly contaminated. For this purpose techniques many times as sensitive as those used previously, are required.

The year covered by this report saw the coming into operation of the Labelling of Food Regulations 1970. These Regulations will no doubt set the pattern of food labelling for a number of years to come. The year also saw continued interest in metallic contamination of food. The Lead in Food (Amendment) Regulations 1972 came into operation on 1st January, their effect being to tighten control on lead in baby foods. The Working Party on the Monitoring of Foodstuffs for Heavy Metals, set up by the Ministry of Agriculture, Fisheries and Food, issued two reports, one on Mercury and one on Cadmium. Finally, the entry of Britain into the European Economic Community brought us into direct contact with the EEC food law harmonisation programme. This programme aims at the harmonisation of food laws throughout the Community so that international trade in foodstuffs is not hindered by a variety of different Regulations in the constituent member states. The Ministry of Agriculture, Fisheries and Food ask various organisations for comments on the various proposals and much of your analyst's time was taken up on this work.

Samples submitted under the Food and Drugs Act totalled 2,308, a slight increase on previous years, with 119 reported as adulterated or otherwise unsatisfactory. There was a sharp increase in samples associated with consumer complaints. At 100 they were well over double the number received in recent years. One hundred and ninety-nine food samples from the Port Health Authority represented an increase of over 100 and there was also some increase in the miscellaneous samples received from other Corporation Departments. It has been generally a busy year made possible by the much improved accommodation, and new equipment which was acquired during 1972.

Samples examined in the laboratory

Health Department:—	
Food and Drugs Act, 1955—Inspectors' samples	2,308
—Samples associated with complaints	100
—Miscellaneous	75
Atmospheric Pollution:	
Daily smoke and sulphur dioxide	2,227
Deposit gauges	35
Miscellaneous	9
Waters:	
Drinking water—routine and complaint samples	65
Other waters	9
Miscellaneous	14
Parks Department:	
Fertilisers and Feeding Stuffs Act, 1926	97
Waters	3
Miscellaneous	1
City Treasurer's Department—Central Purchasing Office	
Disinfectants	6
City Architect's Department:	
Soil samples	8
Waters	2
Miscellaneous	2
Cleansing Department:	
Air samples	10
Trading Standards Department:	
Trade Descriptions Act	1
Education Department:	
Cleanser	1
Port Health Authority:	
Food samples	199
Waters	12
Miscellaneous samples	27

Food and Drugs Adulteration

Food and Drugs Act, 1955

Summary of food and drug samples showing adulteration or other irregularity

Article	Number unsatisfactory
Compound block	1
Custard (canned)	2
Drinking chocolate	1
Fish (canned)	1
Fruit (canned)	8
Fruit curd	2
Fruit juice (canned)	2
Meat and meat products:—	
Fresh meat	1
Canned products	2
Sausages	7
Black pudding	1
Paste	1
Pie	1
Milk	38
Milk, skimmed	1
Milk, dried	4
Milk, imitation dried	1
Milk, malted	1
Milk pudding (canned)	2
Pickles and chutney	4
Salad cream	2
Soup, dried	9
Spices	1
Spirits	2
Stuffing	1
Tomato juice (canned)	10
Vegetables:—	
Fresh	2
Canned	3
Dried	2
Yoghourt	1
Drugs:—	
Belladonna and Phenobarbitone tablets B.N.F.	1
Borax B.P.	1
Calcium lactate tablets B.P.	1
Ethereal soap solution B.P.C.	1
Phenol gargle B.P.C.	1
Total unsatisfactory samples	119

Composition of milk

The average values for the percentages of fat and non-fatty solids in all milks free from added water are set out below:—

	Milk samples other than Channel Islands			Channel Islands Milk samples		
	No.	Fat per cent	Non-fatty solids per cent	No.	Fat per cent	Non-fatty solids per cent
First quarter	185	3·64	8·50	15	4·33	8·73
Second quarter..	177	3·54	8·61	23	4·37	8·93
Third quarter	85	3·63	8·62	16	4·59	8·88
Fourth quarter	81	3·78	8·65	11	4·65	8·94
Average for year	528	3·63	8·58	65	4·46	8·87

Adulteration of milk

Sampling continued at a similar rate to previous years. Out of a total of 554 samples of ordinary milk and 72 samples of Channel Islands milk, 26 samples of ordinary milk and seven samples of Channel Islands milk were found to contain added water.

Prosecutions were instituted against two farmers and one dairy for selling milk containing added water, the highest level of added water recorded being 4½ per cent. Cautions were issued in six other instances.

Small amounts of added water were detected in 28 bottles of milk offered for retail sale. There are two possible explanations for such occurrences. One explanation is the mixing at the dairy of substantially adulterated milk from one farm with genuine milk from other farms. The other explanation is the addition of water in the dairy itself, probably by the faulty operation of the plant. In either event, although the proportion of added water is small, the total amount of added water is considerable because very large volumes of milk are involved.

The fat content of milk is governed by the Sale of Milk Regulations, 1939 which lay down a presumptive minimum of 3 per cent of fat although it is permissible to sell milk with a lower fat content, if it can be shown to be of the same composition as given by the cow. No samples were reported as deficient in fat under these Regulations. The Milk and Dairies (Channel Islands and South Devon Milk) Regulations 1956 lay down that milk so described shall have a minimum fat content of 4 per cent. On this basis two formal samples of Channel Islands milk taken from churns at a farm were found to be 4 per cent and 25 per cent deficient in fat respectively, on account of which the farmer was prosecuted.

The Sale of Milk Regulations also lay down a presumptive minimum of 8·5 per cent of non-fatty solids in milk below which the addition of water is assumed. One hundred and thirty-one samples of milk were found to be deficient in non-fatty solids but shown to be free from added water by the Hortvet Freezing Point test.

The average composition of all samples free from added water was very similar to that recorded in recent years.

Two samples of pasteurised milk, one sample of sterilized milk and one sample of pasteurised skimmed milk, all of which were satisfactory from the point of view of composition, were reported against because they were labelled unsatisfactorily.

Samples other than milk

Some notes on cases of adulteration or irregularity

Fish, canned. A sample of canned sardines in tomato sauce was found to contain 12 parts per million of lead. The maximum lead content for canned fish permitted by the Lead in Food Regulations, 1961, is 5 parts per million. Unfortunately, it proved impossible to obtain a further sample bearing the same code mark on the can. A further can of the same product, bearing a different code mark, contained just over 4 parts per million of lead which was therefore satisfactory.

Fruit, canned. Two samples of canned prunes from the same consignment had a tin content of 260 parts per million. The generally accepted maximum for tin contamination is 250 parts per million. The tin contamination of canned products tends to increase with time; it was considered that this consignment had reached the end of its shelf life and the remainder was withdrawn from sale.

A Code of Practice has been agreed between the local authorities and the Fruit and Vegetable Canners Association of Great Britain on various aspects of the composition of canned fruit and vegetables. One item covered by the Code is the interpretation of the expressions light syrup, syrup and heavy syrup in terms of the sugar strength of the syrups used for canning fruit. There is, inevitably, some reduction in syrup strength after canning, due to dilution of the syrup with water from the fruit. This makes the determination of original syrup strength rather imprecise when carried out on products offered for retail sale. Furthermore, the Code of Practice only refers to products canned in this country and not all foreign packers comply with its requirements. Two samples, one of pineapple pieces in syrup and one of strawberries in syrup, were the subject of adverse reports during the year, due to the use of syrup of very much below the agreed strength. The suppliers were notified.

Fruit juice, canned. Five cans of grapefruit juice from the same consignment were contaminated with tin within the range of 155 to 355 parts per million. As with the samples recorded above the product was considered unfit for human consumption. A similar report was issued on 5 cans of orange juice containing between 300 and 355 parts per million of tin.

Meat and meat products. A sample of minced meat was found to contain 100 parts per million of the preservative sulphur dioxide. Minced meat is not allowed to contain any preservative and an adverse report was issued. If it is anticipated that it may be necessary to take legal proceedings after the analysis of the sample, it is necessary to follow the strict procedure for taking a sample laid down in the Food and Drugs Act. Such a sample is known as a "formal" sample. This procedure is comparatively time consuming and it is common practice for inspectors to submit informal samples, where this procedure has not been followed. In this instance, the sample of minced meat had been submitted informally. After receiving the report of the presence of preservative in the sample, the inspector attempted to obtain a formal sample but the shopkeeper refused to serve him. He was prosecuted for obstruction and fined. A sample of beef sausages was found to contain

710 parts per million of sulphur dioxide. The use of sulphur dioxide in sausages is permitted by the Regulations but only to the extent of 450 parts per million. A subsequent sample from the same manufacturer was satisfactory.

Three meat products were reported as being deficient in meat during the year. The first concerned a sample of pork sausages which contained 57 per cent of meat as against the minimum laid down of 65 per cent. A further sample was satisfactory and the manufacturers were cautioned. A sample of canned stewed steak contained 89 per cent of meat as against the minimum of 95 per cent. A further sample of the same product was satisfactory. A sample of beef spread contained 53 per cent of meat compared with the minimum of 70 per cent laid down in the Fish and Meat Spreadable Products Regulations 1968.

Milk pudding, canned. A number of samples of canned milk puddings were received during the year. One was found to be made with milk which was deficient in fat, although the ingredients declared on the label were "full cream milk, rice, sugar". Analysis showed the sample to contain 2·2 per cent of milk fat and 7·4 per cent of milk solids not fat. This indicated that the original milk used contained only about 2·6 per cent of fat as against a minimum of 3 per cent for full cream milk.

Spirits. A sample of brandy was found to contain 28 per cent of added water and a sample of rum 41 per cent of added water. Both samples were obtained from the bar of a public house and the licensee was prosecuted. In court the defendant was able to show that he had dismissed a barman for watering another product during the interval of time between the taking of the samples and the issuing of the certificates. The court accepted his plea that the dismissed barman was almost certainly responsible for watering the spirits and he was given an absolute discharge subject to the payment of costs.

Tomato juice, canned. The subject of mould contamination of tomato products again received attention during the year. During previous years most attention was paid to tomato paste and puree. This year a considerable number of samples of tomato juice were also examined. The test used, the Howard Mould Count, is designed to give an indication of the condition of the tomatoes used for making the products concerned. Any mould contaminating the tomatoes is broken up during processing and fragments can be found by microscopical examination. The Howard Mould Count gives a measure of the degree of contamination and adverse reports are issued when this is excessive. There is no maximum to the Howard Mould count laid down by law and one importer challenged the analyst's opinion that a particular consignment was unsatisfactory. Ten samples of tomato juice had been examined in which between 35 and 70 per cent of the microscopical fields examined were found to contain mould fragments. The opinion was given that tomato juice should not give a mould count in excess of 25 per cent positive fields and all the samples were considered unsatisfactory. After a considerable time the analyst's findings were accepted and the consignment was re-exported.

Vegetables. It was reported last year that samples of lettuces had been received which contained excessively large residues of fungicide. This year two lettuces were found to contain 25 and 30 parts per million respectively of the fungicide thiram. This level of fungicide residue is very much in excess of the amount which would be considered reasonable and the Food and Drugs Authority in whose area the lettuces were grown was notified so that they could take the matter up with the growers. So far, the only recorded instances of excessive fungicide in lettuces have been during the early part of the year. This is the time when the lettuces are grown indoors and are particularly liable to fungus attack. However, the levels of fungicide which have been recorded on occasions are so high as to indicate that the grower cannot possibly have been following the fungicide manufacturers recommendations when treating his crop.

Labelling of food

The beginning of the year saw the coming into operation of the Labelling of Food Regulations 1970. These Regulations replaced the Labelling of Food Order 1953 which controlled the Labelling of Food until the end of 1972. Although new Labelling Regulations had been made in 1967, they were repealed by the present Regulations before they came into operation. There was thus a period of six years, from 1967 to 1973, after the government had decided to make Regulations before they finally came into effect. The most obvious changes, from the consumers point of view, are that labels are now required to give more detailed information than previously and the manner in which this information is given is also more closely controlled. With the advent of the self-service type of store it is imperative that the information given on the label is sufficient to identify the products completely and it is also important that there is nothing on the label which may mislead a purchaser as to the quality or general composition of the product.

Although the manufacturers had been given a considerable length of time to modify their labels, there were nevertheless a disproportionately large number of labelling offences recorded during the year. In all, 52 samples were reported against. In some instances labels were recorded as being unsatisfactory in several respects and it is therefore difficult to give a complete classification of the unsatisfactory samples.

Where the name of the product does not give an adequate description the label has to bear an "appropriate designation" which indicates "the true nature of the food to which it is applied". In all, 20 inadequate or incorrect appropriate designations were recorded. Incomplete descriptions included dry mixes from which various products could be made, for example soup, stuffing or mashed potato. Although most manufacturers label these correctly as mixes, some omitted the word "mix" and the products were therefore described in the same way as the complete finished product would be described. The only means the customer had of distinguishing these products was by the size of the packet and this in some instances could lead to confusion. Canned fruit and vegetables are normally packed in syrup, water, salted water, or brine, although in some instances a solid pack is used. In four instances, one fruit and three vegetables, the label gave no indication of the type of liquor used for packing the product. In another instance a sample of pickled red cabbage was described simply as "red cabbage" which was held to be an inadequate description.

It is sometimes difficult for the manufacturers to think of a meaningful description for some of the more complicated cocoa and coffee flavoured beverages. In one instance, a beverage was described simply as chocolate, the purchaser being left to discover the true nature of the product by a detailed study of the small writing on the packet. In another instance, involving a coffee flavoured beverage, the customer was left almost completely guessing as to what he was buying. It is understood that this product is no longer available. The manufacturer of a block of imitation chocolate, probably in an attempt to avoid describing it as such, simply used the description "compound block". This again was held to be inadequately described.

The new Regulations require a greater range of products to bear a list of ingredients on the label than previously. Samples of pickling spice, lemon curd and salad cream (two samples) were found to have no list of ingredients on the label and were accordingly reported to be unsatisfactory. Pre-packed samples of black pudding and beef sausages also had no list of ingredients. These were packed in transparent wrappers but are nevertheless classified as pre-packed articles for the purpose of the Regulations and should have a list of ingredients. A can of steak and mushroom pie had an incorrect list of ingredients. Even when not pre-packed, it is still necessary to declare the presence of preservative in sausages by means of a notice in the shop. Four samples of sausages were received during the year containing preservative which was not declared at the point of sale.

Another change introduced by the new Labelling Regulations this year is that there is now a minimum size of lettering specified for various parts of the label. Formerly the only requirement was that various statements should be "clearly legible". In four instances, mixed pickles, canned ravioli, lambs' tongues in jelly and rice pudding, certain parts of the label were in letters of inadequate height. In the case of the canned ravioli the height of the letters used in the list of ingredients was only half a millimetre and in consequence the list was very difficult to read. In addition to the size of the lettering, there are other requirements concerning the list of ingredients with regard to the position on the label etc., which are designed to help the purchaser to find the information he requires. In seven instances, minor irregularities with regard to the declaration of ingredients, other than those outlined above, were recorded.

Four samples of milk were incorrectly labelled. In three instances, the label failed to indicate whether the milk was pasteurised or sterilized. The last instance, concerned skimmed milk which was declared to be "99 per cent fat free". Whether this was intended to mean that 99 per cent of the fat had been removed, which would correspond to a milk containing about 0·03 per cent of fat, or that 99 per cent of the milk was not fat, which would correspond to a sample containing 1 per cent of fat, was not clear, but in either instance the statement was not correct because the sample in fact contained 0·3% of fat. It was held that the label was misleading.

All cases of unsatisfactory labels were dealt with by letters to the manufacturers or packers.

Consumer complaints

A total of 100 samples was examined in connection with complaints from consumers during the year. This figure is over double that recorded in any recent year and reflects the growing tendency for members of the public to take further action when goods they have purchased prove unsatisfactory. The majority of samples are received via the food inspectors, although the Food and Drugs Act makes provision for members of the public to receive a report direct from the public analyst on foodstuffs purchased in the area of the analysts authority.

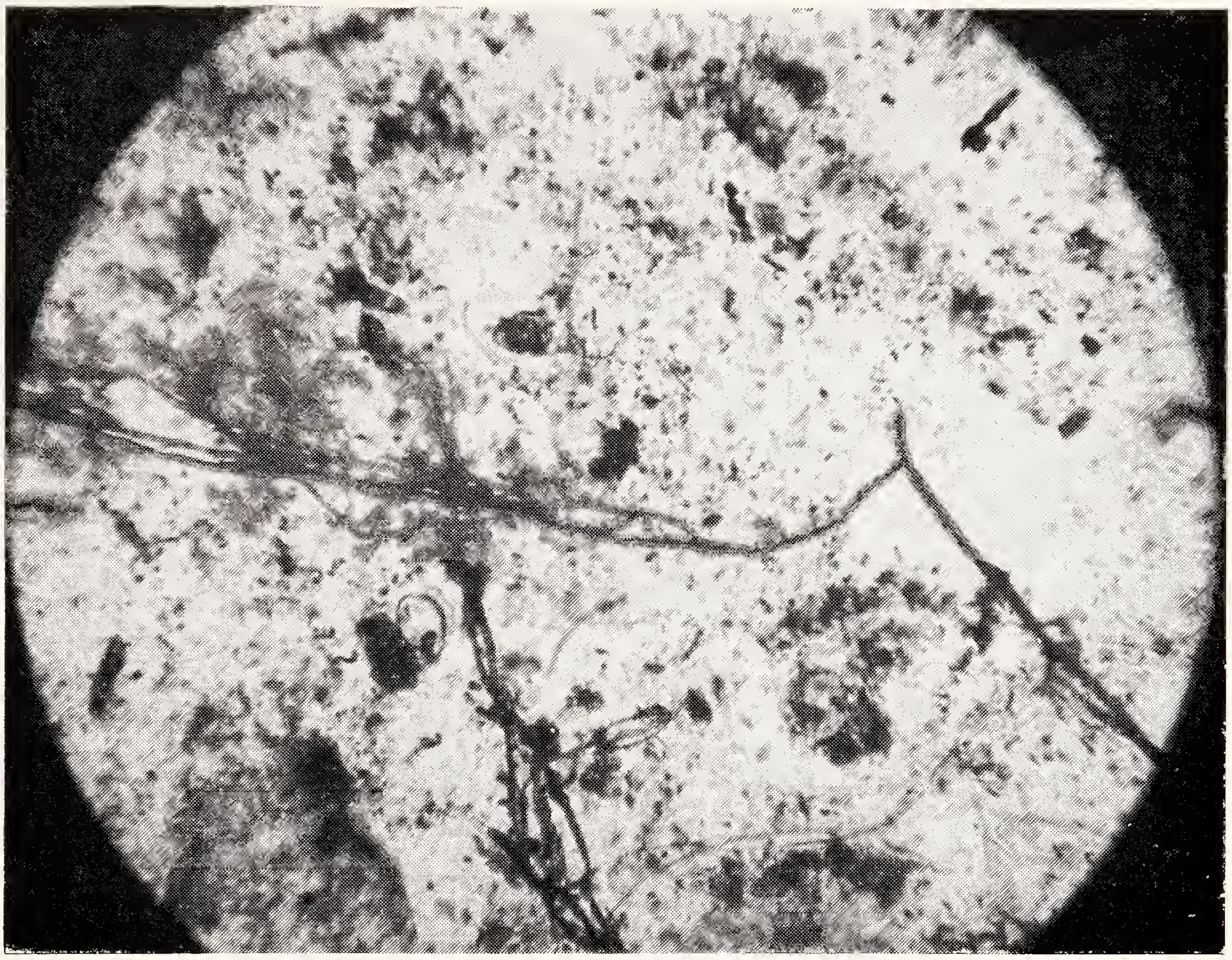
Contamination of food. The variety of different types of contamination which can give rise to consumer complaints is very wide. It ranges on the one hand from the identification of very small specks of fine matter to the investigation of the inclusion of comparatively large foreign bodies. The contamination can be very slight and may, for example, slightly effect the flavour of the food or, on the other hand, be sufficiently serious to cause illness. In addition to identifying the contaminant the analyst is sometimes able to point to its probable source. At one extreme, contamination can occur when an article of food is harvested, and not be removed in the course of the various manufacturing processes to which it is subjected. On other occasions the evidence points to the fact that the contamination took place after the foodstuff had arrived at the purchaser's house. Bread, flour and other cereal products always give rise to a number of complaints, no doubt due to the large amount consumed. The crust of bread can be contaminated from various sources, one of which is the baking tins in which the loaves are baked. Fragments of bread which stick to the tin during one baking may become charred during subsequent bakings and eventually appear as rather unpleasant black objects embedded in the crust of the loaf. Another contaminant met during the year was a dark streak on the crust of the loaf. This was shown to be due to microscopical fragments of metallic tin, which again could have been derived from the baking tin. Fibres of jute were embedded in the crust of another loaf and may have been derived from gloves used by operators in the bakery. Dark particles embedded in another loaf were found to be rodent excreta; microscopical examination showed the crumb of the loaf to be firmly attached to the excreta which must have gained access to the loaf before it was baked. A sliced loaf contained a thin sheet of dark material measuring about 3 centimetres by 1 centimetre. This consisted of a tarry material with a number of paper fibres attached. It was shown to be derived from the packing material used for one of the ingredients of the loaf. This was a waterproof paper bag consisting of two layers of paper with the tarry material sandwiched between.

Sandwiches gave rise to two complaints. In one instance a small sliver of steel about 9 millimetres in length was recovered from a ham sandwich. In another instance material similar to tobacco ash was found in a cheese and tomato sandwich, although the amount present was insufficient for complete identification. Dark coloured specks in flour gave rise to two complaints. In one instance the specks were nothing more serious than fragments of seed coat from the wheat, whereas in the other instance the particles consisted of rust. Four other complaints involving cereal products involved biscuits, sago and potato crisps. Fragments of wood were alleged to have been found in the biscuits, but only one extremely small particle of wood could be found in the sample submitted. This was as small as the fragments of wheat husk that were also present and was not sufficient to justify a complaint. It is possible that larger fragments of wood had originally been present and that these had been removed before the sample was submitted for examination. This illustrates the importance of ensuring that any material delivered to the laboratory is in a condition as near as possible to that in which it was originally purchased. The other contaminated cereal products involved dirt from the processing plant, an insect, which was shown not to have been through the cooking process and a sample contaminated with a dyestuff from the package.

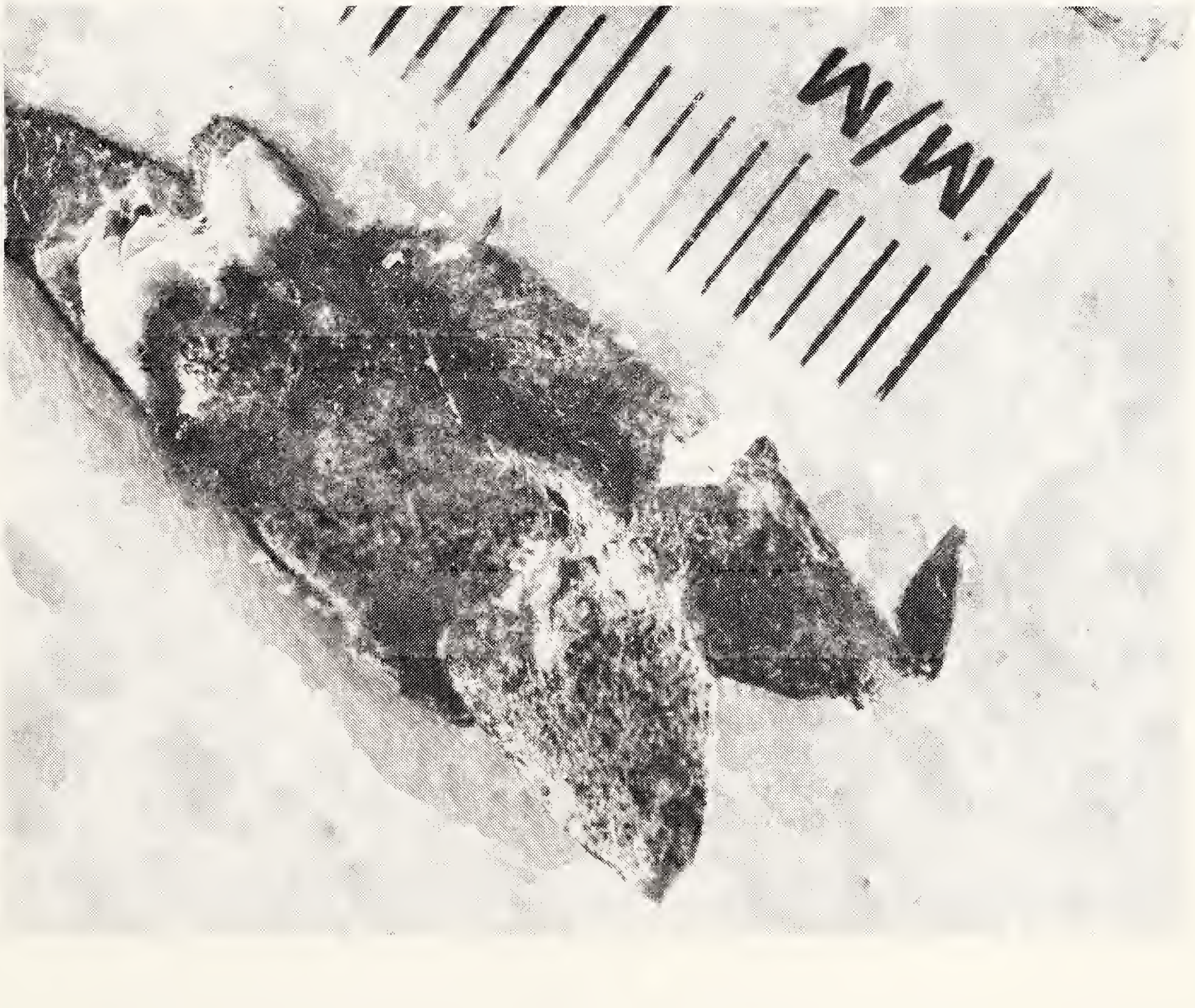
Complaints of foreign matter in miscellaneous other foodstuffs gave rise to interesting samples. A rather unpleasant mass measuring about 6 centimetres by 3 centimetres recovered from a can of tomato soup, on being washed free from soup, was found to consist of a tangled mass of fibrous material. Items identified included cotton, jute, synthetic fibres, rodent hairs, wool, other animal hairs, silver paper, wood splinters and a number of bristles. This range of material would be typical of the contents of a dust-bag of a vacuum cleaner.

A small amount of white sediment was found in a bottle of whisky, part of which had been used. The sediment was found to consist of aspirin and

Identification of Food Contaminants



Mould filament in tomato juice



Foreign matter in bread

there was also a quantity of aspirin dissolved in the whisky. In all, the sample received contained the equivalent of about 13 three hundred milligram tablets of aspirin. Although the aspirin probably had been added maliciously after the bottle had been opened, there was not sufficient present to have any ill effect on anyone who consumed a reasonable amount of the whisky.

A number of white particles found in some vanilla ice cream, which was sold in a waxed carton, were found to consist of paraffin wax of the same composition as that used for the manufacture of the carton. A number of other samples contained foreign matter which could also be associated either with the food itself or the manner of its preparation. Thus a fishcake was found to contain a piece of skin and a bilberry pie a piece of stalk. Turbidity in a sample of cooking oil was due to the partial crystallization of some of the constituents of the oil. On the other hand, a sample of oil which was alleged to explode when used for frying, was found to be seriously contaminated with water. The boiling of the water would give rise to the typical "spitting" or "bumping" of the oil when used for shallow or deep frying respectively.

Discoloration of margarine and cheese gave rise to two complaints. In both instances the discoloration was due to the presence of traces of iron compounds and was probably caused by contact with some part of the machinery in the respective food factories.

Foreign matter in milk bottles accounted for five complaints. These included such items as miscellaneous fragments of vegetable tissue and mouldy milk residues from a previous use of the bottle. It was possible to show by analysis that a cigarette end found in a milk bottle contained some of the ingredients of the detergent used in the bottle washing plant—a finding consistent with the cigarette end having been in the bottle when it was returned to the dairy.

A number of complaints coming under the heading of contamination of food concerned metallic contamination. In some instances these were associated with complaints of sickness and for convenience all these complaints are dealt with below under that heading.

Nature and composition of food. A complaint was received that some bottles of ginger ale were not genuine. Apparently, the bar in which the ginger ale was served had run out of small bottles of ginger ale and had therefore refilled some small bottles from large bottles. Although this pouring of the ginger ale from one bottle to another had resulted in some loss of carbon dioxide, analysis showed the composition of the ginger ale was otherwise normal for this brand. The characteristic "sharp" taste for ginger ale is due to two factors. One is the sharp taste of the ginger itself and the other is the taste of the carbon dioxide which is used in all aerated drinks. In this instance the loss of carbon dioxide coupled with the original mild flavour of the drink, was sufficient to give rise to the complaint. Other drinks examined included a hardly used bottle of vodka which was alleged to be of inadequate strength. In fact the strength of the spirit agreed with that declared on the label. Samples of Irish coffee which had been served at a bar were alleged to contain very little whisky. The traditional recipes for Irish coffee use coffee, sugar, whisky and cream. There is however, no defined quantity of whisky to use and very little information is available as to what is normally served. Coupled with this difficulty was the fact that in each case some of the coffee had been consumed before the sample was brought into the laboratory and there was also the possibility of evaporation of the alcohol. It was estimated that all the samples contained fairly well under half a measure of whisky in each portion. This sounds unreasonably low but more work is needed before any firm action can be taken.

A complaint was received of the colour of some fresh minced meat. It was found to be heavily coloured with an artificial red dye. The addition of colour to fresh meat is not permitted.

Four complaints were received during the year that food was not of the nature stated. These comprised two samples of plaice, one of beef and a sample of buttered rolls was alleged to have been spread with margarine. In all cases the samples were found to be perfectly satisfactory.

Flavour of food. A number of complaints were received either that food was tainted or that the flavour was otherwise adversely affected. On some occasions this was alleged to be due to some form of contamination, but on others no additional information was received. The most interesting investigation involved a taint in full cream evaporated milk. It had been observed at one of the Health department clinics, that a certain brand of evaporated milk developed an unpleasant smell shortly after opening. This fact was confirmed on several samples which were opened in the laboratory. It was noted that immediately after opening the can the contents had a perfectly normal smell, but that a most unpleasant odour developed after only a few minutes. If the milk was left to stand for a fairly long time the unpleasant smell diminished gradually. Comparison of 10 different brands of evaporated milk suggested that the taint was associated with the contamination of the contents of the can with tin. In general, the tin content of cans which were internally lacquered was quite low and no taint developed in any case. The tin content on the unlacquered cans was considerably higher, averaging about 100 parts per million, and in all cases a taint developed. In view of the fact that evaporated milk is frequently used for feeding very young infants, it would seem desirable to reduce the tin contamination to as low a level as possible and this is achieved by those manufacturers who use internally lacquered cans. By this means the taint is also, incidentally, eliminated although the exact detail as to how it is caused was not established in the course of the investigation.

A complaint of taint in some carrots was shown to be due to contamination with a trace of paraffin or other similar petroleum product. The amount present was quite small, of the order of a few hundred parts per million, but nevertheless sufficient to cause the offending taint. As very similar petroleum products are used both for oil-heaters and as tractor fuel, there are many different ways in which the paraffin could have gained access to the carrots. A sample of stewed steak with gravy was received with the complaint of unsatisfactory taste. It was confirmed that the product was of rather poor flavour but it was not possible to pin point any specific taint. As the price of goods varies so does their overall quality and it was felt on this occasion that the trouble was no more than a rather inferior product.

In general, the detection of off-flavours is a very subjective matter and it is not always possible to confirm these in the laboratory. For such taints are often of a transient nature and may have disappeared by the time the sample is received. Two samples of desiccated coconut, alleged to be rancid were found to be wholesome. Some stewed rhubarb, alleged to be tainted with pesticide was found to be free from contamination. Samples of lemon cheese and stone ground flour were satisfactory. On the other hand, some stewed apple was found to be "sweetened" with salt! No doubt the apples used had been perfectly good.

Sickness. When food is suspected of causing sickness, samples are normally submitted by the Inspectors to the Public Health Laboratory for bacteriological examination. If there appears to be a possibility of a chemical cause samples are also received in this laboratory for analysis.

Three samples of canned food were received which were alleged to have caused illness and in addition three other samples were received which were stated to have a metallic taste. It is interesting to consider all these samples together and details are recorded below:—

Sample	*Complaint*	*Tin content*
Curried beans	Metallic taste	115 parts per million
Fruit salad	Metallic taste	220 ,, ,, ,,
Curry sauce	Metallic taste	280 ,, ,, ,,
Pilchards	Diarrhoea	30 ,, ,, ,,
Fruit salad	Sickness	430 ,, ,, ,,
Tomato juice	Sickness	530 ,, ,, ,,

There is no statutory maximum for tin contamination although a tentative limit of 250 parts per million was suggested many years ago. Unfortunately, there is little information available on the effect of eating canned food that is contaminated with tin. On the other hand, cases of sickness crop up from time to time which are associated with the consumption of food containing a few hundred parts per million of tin and where no other cause of sickness can be traced. No cause of the illness was found in any of the three instances quoted above and it was suggested that the tin content may well have been the cause in the cases of the fruit salad and the tomato juice.

In one instance, a complaint of metallic taste was associated with a tin content above the recommended maximum. In two other cases figures below the maximum were recorded although the level of contamination was above that normally found in canned foods.

All this information taken together suggests that the usual limit of 250 parts per million may well be too high. More work is needed to establish the safe limit and the point at which a metallic taste can first be detected. The tin content of canned foods is derived from the tin lining of the can which is slowly dissolved away by the constituents of the food and tends to increase the longer the food is stored. A reduction in the limit would involve adopting a more rapid turnover of stock or the more widespread use of internally lacquered cans, although lacquered cans are not necessarily suitable for all products.

A sample of sugar which was thought to have caused sickness was found to contain a number of opaque white grains in addition to the usual transparant sugar grains. These were found to be ampicillin, an antibiotic of the penicillin group. The only conceivable way this could have gained access to the sugar was by deliberate addition, probably in the home. Ampicillin is only available on prescription and would normally only be possessed by someone who had been given it to cure an illness.

Two samples were of unusual composition although no positive cause of illness could be found. One was a jar of piccalilli, alleged to have caused an allergic rash, where the salt content was rather high but otherwise the composition was normal. The other was a jar of pickled mussels where the vinegar in which they were pickled was unusually strongly acid. Seven other samples gave no chemical indication of the cause of illness.

Drugs

Sixty-four samples of drugs were submitted to the laboratory during the year. About one third of them represented drugs which are only available on prescription whilst the remainder were preparations which could be bought over the counter by members of the public. Adverse reports were made on five samples. In one case there was a labelling irregularity, and two samples marginally failed to comply with the stringent British Pharmacopoeia standards. A sample of Borax B.P. had suffered serious moisture loss presumably due to inadequate packing or storage, whilst a sample of Phenol Gargle B.P.C. was double the specified strength.

Metallic contamination of food

Samples are regularly tested for the presence of traces of arsenic, copper, lead, mercury and tin as appropriate. This year work was also done on the cadmium content of some foodstuffs, mainly for the Port Health Authority, following the concern shown over the toxicity of this metal and its occurrence in some foods, especially shellfish. No instances of excessive cadmium contamination was encountered. Notes on some of the other metals are given below:—

Lead. Three samples, one of sardines in tomato sauce from the City and two of imported pickles from the Port Health Authority were found to contain lead in excess of the limits laid down in the Regulations. The sardines contained 12 parts per million of lead against a maximum permitted level of 5 parts per million. This is well above the limit but further samples of the same brand were found to be satisfactory, although even they had lead contents above the evarage normally found. Altogether, thirteen samples of pickles and spices were examined for the Port Health Authority, most of them from the far east. The two pickles showing high lead content represented different varieties from the same manufacturer in the same consignment.

The Lead in Food (Amendment) Regulations, 1972 came into operation on 1st January. These Regulations imposed a new maximum of 0·5 parts per million of lead in baby foods. Thirty-one samples of baby food were examined for lead content during the year and no sample was recorded as having a lead content exceeding this value.

Mercury. Thirty-four samples of canned fish were examined for mercury content. In general, very low figures were obtained and no sample was reported as containing an excessive amount. Tuna again contained more mercury than most other fish, an average of 0·13 parts per million being recorded. The highest figure recorded was 0·35 parts per million in anchovies and the average for all samples was 0·07 parts per million.

Tin. Contamination of food with tin is generally caused by contact with the tin lining of cans. The attack is progressive and excessive contamination is usually found in products which have been in stock for some time. In general acid foods, such as fruits, show the greatest contamination. Some products, such as prunes and tomatoes, are particularly liable to tin contamination. Four samples were recorded as containing tin in excess of the generally accepted maximum of 250 parts per million. Two samples of prunes had a tin content of 260 parts per million. A group of five cans of grapefruit juice had tin contents ranging from 155 to 355 parts per million and five cans of orange juice ranged from 300 to 355 parts per million. Consumer complaint samples examined for tin content are discussed in detail above under "consumer complaints—sickness".

Miscellaneous samples examined for the Health Department

During the year the laboratory and the Manchester Business School collaborated on a study of the availability and description of wholemeal bread in the City. Three different types of brown bread are defined in the

Bread and Flour Regulations 1963. Firstly, there is wheat germ bread, which contains 10 per cent of added wheat germ. This type of bread is usually sold under a proprietary name such as "Hovis". Secondly, there is wheatmeal bread. This contains rather more of the outer fibrous layer of the wheat grain than white flour. It corresponds to a flour of about 85 per cent extraction and contains at least 0·6 per cent of fibre. It can also be called simply "brown bread". Finally, there is wholemeal bread. Strictly speaking this is made from the whole of the wheat (100 per cent extraction) but in practice only a mill making stone ground flour normally achieves this. Modern mills automatically reject the outer layers of the wheat and in order to make a wholemeal flour the rejected portion has to be remixed with the white flour. The wholemeal flour so produced often corresponds to an extraction rate of about 95 per cent. This product is even more fibrous than wheatmeal, the fibre content being of the order of 2 per cent.

For the survey a number of shops were visited in three different areas of the City and a small wholemeal loaf was asked for. In all, 32 loaves described as wholemeal were submitted to the laboratory. Of these only seven were genuine wholemeal bread. Twenty-three were wheatmeal, one was wheat germ and one had a fibre content below that of wheatmeal. All loaves described as stone ground were genuine wholemeal. In only three instances did the shop assistant say that they did not have wholemeal bread and offered a wheatmeal as an alternative. In all these cases the loaves supplied were correctly described.

It is clear from the results of this survey and from the replies that were received to questions that were asked in the shops visited, that the majority of shop assistants did not know the difference between the three types of brown bread, even though many were confident that they did. Genuine wholemeal bread was available in only one shop in five of those offering it. The point of all this is not necessarily whether wholemeal bread is superior to wheatmeal. The two products are both available and are quite different and it is necessary for the purchaser to be able to distinguish one from the other. Assuming the three small areas investigated are typical of the City as a whole a considerable amount of work will need to be done before bread offered for sale is uniformly described.

A "Donald Duck" glove puppet was examined for compliance with the requirements of the Toys (Safety) Regulations. It was of a similar type to one which had been reported on a television programme as containing an excessive amount of lead in the paint used. The puppet examined was satisfactory and must have been from a source different from the one previously reported.

Nine different brands of crayons were examined in connection with a case of lead poisoning involving an infant. All the brands tested were satisfactory, the lead contents ranging from three to 40 parts per million. It was, however, reported that the girl in question was eating the crayons like sweets and that she would sometimes consume a whole packet in one afternoon ! If the crayons she was being given were one of the higher lead content brands, it is possible that they could have been a contributory factor in the lead poisoning, although with such an unusual taste it seems probable that she chewed a great variety of other, possibly contaminated, objects as well.

Fragments of a broken ampoule were examined in connection with the alleged use of "stink bombs" in a public building. A very faint odour of an organic sulphur compound was just perceptible but all the original contents had evaporated and there was insufficient residue for analysis. The reconstructed ampoule was unlabelled but similar to a type sometimes used for storing unpleasant or dangerous chemicals. It did not resemble a commercially produced stink bomb.

Two miscellaneous samples were examined in connection with water problems. A stain on a cloth which had been held over a running tap was due to the presence of iron in the water. Sludge from a trap in the drain from a drinking fountain was a bacterial slime growth which did not indicate any specific pollution.

The Deposit of Poisonous Waste Act (1972) requires anyone depositing poisonous waste to notify the local authority. Advice was given by the laboratory on problems and hazards associated with the operation of the Act on a number of occasions. It frequently happens that laboratories accumulate quantities of chemicals of a hazardous nature that are surplus to their requirements. They tend to be kept in the laboratory store for prolonged periods of time until pressure of space forces their disposal. Assistance to a number of school laboratories was provided in disposing of small quantities of chemicals. Some of these were received by the laboratory to be rendered harmless before disposal and advice on the disposal of others was given.

Water samples

The water samples examined may be classed as follows:—

Drinking waters	
Samples taken to investigate complaints	10
Routine examinations and checks on previous complaints	12
Investigations into lead content	43
Ships' drinking waters	10
Other waters ex Port Health Authority	2
Waters other than drinking waters	
Rochdale canal	10
Miscellaneous	4
	91

Drinking water

The public analyst's laboratory is concerned with the public health aspect of water from the chemical point of view and the "wholesomeness" of the water supply is the primary consideration. The corresponding responsibility from the bacteriological point of view is borne by the Public Health Laboratory Service. The examination of samples by these two laboratories serves as an independent check on the regular tests carried out in the Waterworks Laboratory.

All ten samples taken for routine examination were found to be normal and reported as wholesome subject to a satisfactory bacteriological report.

The complaint samples from individual consumers fall into two categories. There were seven complaints of "dirty" or discoloured water, three of them justified and a further five complaints relating to taste, two of which waters were organoleptically abnormal.

Samples of water were taken at fifteen premises in connection with investigations into the extent of pollution of water passing through lead piping. In two of these instances residents in the properties were suffering from lead poisoning; analysis indicated that tap water was not the primary cause in either case.

Ten samples taken over the year from the stretch of the Rochdale canal which is now a landscaped children's play area indicated that the water could be classified as "clean" when judged by the standards recommended for River Waters by the Royal Commission on Sewage Disposal. In stretches of the modified canal there were certain problems of silting up owing to the slow flow of the water and two of the above samples were taken in connection with a special investigation by the Parks Department into this problem.

The four miscellaneous samples were submitted by various Corporation Departments in connection with specific problems. The Parks Department submitted water from a fishing pond alleged to have been subjected to aerial pollution.

The City Architect's Department asked for rainwater penetrating concrete at the multi-storey car park at the Airport to be analysed in connection with damage to the paintwork of a car. Water from a stream into which a reclaimed tip drains was examined for the City Architect's Department.

The borehole water supply to the City Abattoir was analysed to assess its suitability for all the processes for which it is required.

Samples from other sources

Three hundred and sixty-eight samples were submitted by other departments and outside bodies in connection with the enforcement of various Acts and Regulations and the checking of the quality of goods purchased by the Corporation.

In the latter category were samples of disinfectant fluid submitted by Central Purchasing Office of the City Treasurer's Department and a toilet cleaner from the Education Department.

Various soil samples have been analysed in connection with reclamation work on tips being directed by the City Architect's Department.

A range of gas tests was carried out at a Cleansing Department transport depot as a result of complaints of excessive pollution of the air by carbon monoxide.

Parks Department

Ninety-seven samples of fertilisers were submitted for analysis under the Fertilisers and Feeding Stuffs Act 1926 and 31 of these were reported as unsatisfactory. The failure rate of 32 per cent is an improvement on last year but still gives cause for considerable concern. Many fertilisers have to be examined for trace elements as well as bulk composition. Some of these constituents are present at very low levels and it is only necessary for one such ingredient to be outside the prescribed limits of variation for an adverse report to be made on it. Wrongly declared trace elements accounted for ten adverse reports: more than one fifth of all samples examined had a bulk composition which was outside the permitted limits allowed on the declaration of ingredients.

Manchester Port Health Authority

A total of 211 samples was received during the year made up of 10 samples of ships' drinking water, two other water samples and 199 food samples. These included 19 samples of tomato paste and 27 samples of tomato juice.

In the general foodstuffs canned fruit products, vegetables and pickles predominated but there were a number of more exotic items of Asian origin. Adverse reports were given on 25 samples. Three samples of Indian pickle contained lead in excess of the general limit of 2 parts per million laid down in the Lead in Food Regulations and a fourth sample contained 1,500 parts per million of benzoic acid which is a preservative not permitted for use in pickles. Three samples of sugar confectionery contained the artificial colour Brilliant Blue F.C.F. which is not included as a permitted colour in the Colouring Matter in Food Regulations. Two samples of syrup topping contained sorbic acid contrary to the Preservative in Food Regulations. Eleven samples of tomato juice contained mould in excess of the recommended maximum of 25 per cent positive fields. A sample labelled granulated honey contained about 33 per cent of starch and three samples of gherkins in brine contained very flourishing colonies of yeast. Finally a sample of canned anchovies contained 7 parts per million of lead.

A number of samples was pre-packed for retail sale and on three occasions labelling irregularities were found. These irregularities would only represent an offence against the Labelling Regulations when the products were offered for sale. Nevertheless they were noted in the reports so that the importers could be warned and take suitable action to correct the labels.

The 19 samples of tomato paste represented eleven consignments from Mexico, Israel, Greece, Turkey and Portugal. These were examined for mould content using the Howard Mould Count technique. The maximum limit for this count is 50 per cent positive fields; all consignments complied with this limit, the overall average mould count for all samples examined being 23 per cent positive fields.

The 27 samples of tomato juice represented 20 consignments all from Israel. When examined for mould content five consignments were above the recommended limit of 25 per cent positive fields; the overall average mould count for all samples was 21 per cent positive fields.

Measurement of atmospheric pollution

The national survey of air pollution is based on the results obtained by the standard volumetric apparatus for the determination of smoke and sulphur dioxide. Work has continued at the same sites as last year.

Measurements of deposited matter have also been made by the analysis of samples collected in three standard atmospheric deposit gauges. The gauges are sited in selective areas having high, medium and low air pollution.

Samples are also examined in connection with specific complaints from members of the public. The bright green deposit from the garden path of a house adjacent to a metal pickling plant and suspected of being a copper salt was shown to be algae.

A deposit which suddenly appeared on cars in the vicinity of a paint works after a bath of varnish had exploded was demonstrated by spectroscopic examination to have some of the characteristics of linseed oil, a finding consistent with the deposit being varnish.

Another deposit removed from a car was shown to be similar to a type of moulding sand used at a nearby foundry.

Volumetric apparatus for smoke and sulphur dioxide

Daily averages—microgrammes per cubic metre

Station No.	11 Central			13 Withington			15 Clayton			21 Springfield –Crumpsall			17 Wythenshawe Centre			18 Rusholme Chest-Clinic			19 Monsall			22 Hulme		
1973	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio	Smoke	SO_2	Ratio
January ..	137	316	0·43	73	164	0·45	180	264	0·68	123	214	0·57	93	120	0·78	180	243	0·74	136	227	0·60	130	214	0·61
February ..	58	222	0·26	33	110	0·30	80	196	0·41	71	137	0·52	38	121	0·31	69	173	0·40	62	139	0·45	54	160	0·34
March.. ..	77	225	0·34	45	114	0·39	95	212	0·45	71	171	0·42	45	109	0·41	99	184	0·54	96	201	0·48	81	162	0·50
April	38	146	0·26	25	107	0·23	33	142	0·23	29	110	0·26	25	90	0·28	40	160	0·25	36	174	0·21	29	120	0·24
May	28	126	0·22	17	104	0·16	26	140	0·19	25	132	0·19	18	73	0·25	28	127	0·22	24	119	0·20	21	97	0·22
June	28	128	0·22	22	110	0·20	28	132	0·21	31	133	0·23	25	102	0·25	27	124	0·22	28	120	0·23	22	102	0·22
July	29	85	0·34	20	96	0·21	31	107	0·29	35	118	0·30	19	68	0·28	27	105	0·26	28	90	0·31	25	86	0·29
August ..	40	95	0·42	24	86	0·28	45	114	0·39	49	149	0·33	23	60	0·38	39	104	0·38	33	104	0·32	25	75	0·33
September ..	64	121	0·53	35	84	0·42	66	113	0·59	54	90	0·60	40	65	0·62	66	123	0·53	58	104	0·55	52	82	0·63
October ..	85	170	0·50	50	112	0·45	114	177	0·64	50	123	0·41	50	97	0·51	87	168	0·52	91	155	0·59	84	139	0·60
November ..	140	240	0·58	75	143	0·52	156	222	0·70	139	176	0·79	78	114	0·68	165	207	0·80	151	213	0·71	121	207	0·58
December ..	62	142	0·44	32	82	0·39	65	130	0·50	68	96	0·71	38	56	0·69	79	126	0·63	70	144	0·49	40	112	0·36
Daily average for year ..	65	168	0·35	38	109	0·35	77	162	0·48	62	137	0·45	41	80	0·51	75	154	0·49	68	149	0·46	57	130	0·44

The results were calculated from tables supplied by Warren Spring Laboratory, sulphur dioxide from tables dated 1961 and still currently in use, smoke from revised tables dated 1965.

VETERINARY SERVICES

For the tenth consecutive year there has been no case of notifiable disease in animals or poultry within the City. At national level freedom from foot and mouth disease, swine fever and rabies contrasted with a considerable increase in the incidence of swine vesicular disease, which gained entry into the United Kingdom for the first time during the preceeding year.

The progress of eradicating brucellosis continued and several additional areas of the country were declared to be Eradication Areas for this purpose; as a result of these measures the cattle population regarded as being free from this disease rose from 32.6 to 42 per cent.

The New Smithfield Market dealing with the wholesale supply of fish, poultry, fruit and vegetables became operational in October, thereby allowing the new vastly improved facilities to be utilized in time for the busy Christmas period.

Assistance and advice was always readily available from the staff of the Public Health Laboratory and from the Public Analyst and was greatly appreciated.

The Food and Drugs Act, 1955

The Meat Inspection Regulations, 1963

The Meat Inspection (Amendment) Regulation, 1966

The Meat Inspection (Amendment) Regulations, 1971

These Regulations prohibit the movement of a carcase, or any part thereof, from a slaughterhouse until the carcase has been inspected to the required standards and stamped accordingly. The entire throughput of Manchester Abattoir was inspected in accordance with these Regulations.

The Slaughterhouses Act, 1958

The Slaughterhouses (Hygiene) Regulations, 1958

The Slaughterhouses (Hygiene) (Amendment) Regulations, 1966

Twenty-two infringements of these Regulations were noted, written warnings being issued in each instance, and no subsequent recurrence was observed.

The Food Hygiene (Markets, Stalls and Delivery Vehicles) Regulations, 1966

Two prosecutions were taken for contraventions of these Regulations, fines of thirty pounds and twenty pounds being imposed, with costs of five pounds in each instance. Written warnings were issued in respect of fourteen further infringements, involving shortcomings in the cleanliness of vehicles attending the Wholesale Meat Market to collect meat.

In every case the defects were remedied before the vehicle concerned returned to the market.

School canteens

One thousand five hundred and seventy-seven visits were made to school canteens and 69 visits to central kitchens supplying meals to schools; a further 220 visits were made in response to requests from canteen supervisors for advice regarding the wholesomeness or quality of individual consignments of food.

Bacteriological examination of shellfish

Seventy-four samples were taken and none was rejected.

As a routine measure sixteen samples of watercress and five samples of lettuce were taken and found to be satisfactory.

Exportation of meat

Most countries importing meat or meat products stipulate that each consignment shall be accompanied by a certificate affirming freedom from disease on ante-mortem and post-mortem veterinary examination.

Two hundred and fifty-eight consignments involving 58,860 carcases were exported to countries within the European Economic Community and 277 hind quarters of beef were exported for the Far East.

The Imported Food Regulations, 1968

Under these Regulations responsibility for the examination of imported foods is placed on the receiving authority, subject to the receipt of advanced information that this has not taken place at the port of entry.

Examinations undertaken

Year	Number
1968	155
1969	734
1970	2,099
1971	2,400
1972	1,016
1973	2,400

The Slaughter of Animals Act, 1958

This Act prohibits the slaughtering of food animals by any person not holding a licence or a provisional licence to slaughter.

Thirty-six licences and 5 provisional licences were issued.

Poultry inspection

Number of poultry processing premises within the district ..	7
Number of visits to these premises	280
Total Number of Birds processed during the year	466,500

Types of birds processed:—

Turkeys	7,000
Ducks	6,500
Hens	400,000
Broilers	60,000
Capons	3,000
Percentage of birds rejected as unfit for human consumption	0.04%

Weight of poultry condemned as unfit for human consumption 20,000 lbs.

Pet Animals Act, 1951

This Act prohibits the keeping of a pet shop without an appropriate licence issued by the local authority wherein the shop is situate.

Further provisions are intended to ensure the preservation of good health and wellbeing of animals in pet shops by prohibiting overcrowding, sale at too early an age and undue exposure to disease. An adequate supply of water, food, ventilation and warmth must be provided.

Twenty-four licences were issued after inspection of the premises by the veterinary staff and 120 routine visits were undertaken.

Animal Boarding Establishments Act, 1963

This Act requires all boarding establishments for dogs and cats to be licenced by the local authority.

The general provisions are similar to those of the Pet Animals Act, 1951, with an additional requirement, necessitating the keeping of a register containing a description of all animals received, the date of their arrival and departure and the name and address of the owner.

Nine licences were issued and 70 visits of inspection were made by the veterinary staff.

Diseases of Animals Act, 1950

Diseases of Animals (Waste Food) Order, 1957

This Order requires that all "waste food" intended for the consumption of animals and poultry shall be boiled for one hour in a plant licensed by the local authority for this purpose. This provision is intended to prevent the spread of disease amongst animals and poultry as a result of contact with infected food.

Fifteen plants were licenced and 180 visits of inspection were made.

The Movement of Pigs (Waste Food Precautions) Order, 1973

The above Order, which came into operation on 19th April, requires that all pigs which have been fed on "waste food" within the preceeding three months shall not be moved other than to a slaughterhouse and then only subject to the conditions of a licence granted by the local authority from whence the pigs originated.

One hundred and fifty licences were issued.

Transit of Animals Order, 1927-1947

Transit of Animals (General) Order, 1973

Conveyance of Live Poultry Order, 1919

The requirements of these Orders are intended to ensure that humane and hygienic conditions are provided for the transportation and exposure for sale of animals and poultry. Two hundred and eighty visits of inspection were made by the veterinary staff.

Notifiable disease of animals

Anthrax

Once again there was a reduction of the incidence of this disease at national level and no case occurred within the City. As part of routine precautionary measures however, where the cause of death appeared to be obscure, microscopical examinations were undertaken in respect of 10 cattle, 86 sheep and 48 pigs.

The Foot and Mouth Disease Order, 1938

The Swine Fever Order, 1963

The Swine Vesicular Disease Order, 1972

The Tuberculosis Order, 1964

The Fowl Pest Order, 1936

No outbreaks of these diseases occurred within the City.

The Swine Vesicular Disease (Controlled Areas) Restrictions Order, 1972

At various times within the year an area of the country which included the City of Manchester has been declared to be a ''Controlled Area'' within the meaning of the above Order.

One of the requirements of a ''Controlled Area'' Order is prohibition of movement of pigs unless subject to the provisions of a licence granted by the local authority.

Six hundred and seventy-nine licences were issued.

Live Poultry (Restrictions) Order, 1971

The Live Poultry (Restrictions) Amendment Order, 1972

Under these Orders, local authorities are empowered to grant licences permitting the holding of exhibitions of poultry, subject to the provision that records indicating the origin and destination of the birds are kept available for inspection. An application to hold an exhibition of poultry as part of the Manchester Flower Show in July was approved.

Regulation of Movement of Swine Order, 1954

This Order prohibits the movement of pigs from a market unless accompanied by a licence issued by the local authority. One of the provisions of such a licence is that, in the case of private premises, the pigs shall be detained there under conditions of isolation for a minimum period of 28 days.

Sixty visits of inspection were made by the veterinary staff.

TABLE A

Animals inspected at time of slaughter at the City Abattoir 1971–1973

Year	Cattle	Sheep and Lambs	Calves	Pigs
1971	45,544	190,862	2,323	33,546
1972	50,613	206,820	1,108	28,774
1973	51,295	282,638	1,939	59,443

TABLE B

Total condemnation of various foodstuffs 1971–1973

Year	Meat (tons)	Fish and shell-fish (tons)	Fruit (tons)	Vege-tables (tons)	Game (head)	Poultry (head)	Rabbits (head)	Eggs (No.)	Canned meats milk and sundry provisions
1971	160·59	22·26	180·91	234·83	160	6,741	958	200	8·75
1972	174·45	19·00	217·91	274·06	135	9,818	906	Nil	4·14
1973	224·70	32·40	225·58	287·61	84	11,882	278	80	4·07

TABLE C

Food condemned at the City Abattoir and Wholesale Meat Market

	1973	1972
	tons	tons
Total weight of meat condemned at the City Abattoir and Wholesale Meat Market	224·70	174·45
Of which the weight of dressed meat consigned from places other than the City was	23·41	43·45
Included in which were imported offal amounting to	831 lbs.	530 lbs.

Table D

Carcases inspected and condemned in 1973

	Cattle excluding cows	Cows	Calves	Sheep and lambs	Pigs
Number killed and inspected:—					
At the City Abattoir	41,045	10,250	1,939	282,638	59,443
Brought into the City after killing	17,633		524	447,441	68,013
(Figures for 1972)	21,048		443	429,186	91,973
All diseases except tuberculosis					
Whole carcases condemned					
At the City Abattoir	43	—	61	697	125
Brought into the City after Killing	34	—	4	7	27
Carcases of which some part or organ was condemned:—					
At the City Abattoir	16,795	—	57	16,358	2,009
Brought into the City after killing	1,405	—	7	178	305
Percentage of the number inspected affected with diseases other than T.B.					
At the City Abattoir	32·741	—	2·939	5·787	3·379
Brought into the City after killing	7·968	—	1·335	0·039	0·448
Tuberculosis only:—					
Whole carcases condemned					
At the City Abattoir	—	—	—	—	—
Brought into the City after killing	—	—	—	—	—
Carcases of which some part or organ was condemned					
At the City Abattoir	—	—	—	—	39
Brought into the City after killing	—	—	—	—	—

Table E

Incidence of Tuberculosis

Year	Cattle slaughtered at abattoir	Condemned for tuberculosis		Percentage incidence	Pigs slaughtered at abattoir	Condemned for tuberculosis		Percentage incidence
		Carcases	Part carcases and organs			Carcases	Part carcases and organs	
1971	45,544	—	—	—	33,546	—	153	0·46
1972	50,613	—	—	—	28,774	—	104	0·36
1973	51,295	—	—	—	59,443	—	39	0·006

Amount of unwholesome food condemned

	1973	1972
Meat:—	lbs.	lbs.
Beef	389,477	318,854
Mutton	73,115	35,722
Veal	6,860	1,345
Pork	33,047	34,327
Imported Offal	831	530
	503,330 lbs. 224·700 tons	390,778 lbs. 174·45 tons
Fish:—	lbs.	lbs.
Fish	65,729	25,722
Shellfish	6,860	16,871
	72,589 lbs. 32·40 tons	42,593 lbs. 19·00 tons
	Head	Head
Game	84	135
Poultry	11,882	9,818
Rabbits	278	906
Fruit	505,299 lbs. 225·58 tons	488,118 lbs. 217·91 tons
Vegetables	644,257 lbs. 287·61 tons	613,889 lbs. 274·06 tons
Miscellaneous:—	lbs.	lbs.
Evaporated, condensed and other milk	288	22
Canned meats and meat products	6,477	5,265
Sundry provisions	2,360	3,990

Poultry and game, fruit and vegetables, provisions etc., destroyed as being unfit for human consumption, during 1973.

Poultry and Game	Head
Fowl	11,399
Turkeys	172
Ducks	157
Pigeons	154
Pheasants	72
Partridge	7
Grouse	5

Fruit	
Apples	129,257
Apricots	996
Aubergines	4,001
Avocado	3,392
Bananas	5,004
Blackcurrants	45
Cherries	1,493
Capsicum	2,286
Cranberries	360
Figs	91
Grapes	6,974
Grapefruit	15,772
Gooseberries	3,048
Lemons	44,190
Melons	34,966
Mangoes	1,479
Nectarines	1,556
Nuts	15,303
Oranges	89,809
Pears	39,918
Peaches	29,647
Plums	7,535
Pommegranate	80
Pineapples	4,459
Rhubarb	160
Raspberries	63
Redcurrants	144
Strawberries	3,176
Tomatoes	24,041
Tangarines	36,234

Vegetables	lbs.
Artichokes	540
Beans	6,268
Beetroot	14,558
Brocoli	1,236
Cauliflower	118,547
Cabbage	120,778
Carrots	89,020
Celery	4,303
Chicory	212
Corn	708
Courgettes	1,741
Cucumber	21,594
Coriander	140
Endives	1,375
Leeks	2,539
Lettuce	22,315
Marrow	6,119
Mushrooms	1,923
Okra	73
Onions	116,782
Parsley	1,457
Parsnips	5,074
Potatoes	58,667
Radish	2,511
Spices	927
Sprouts	38,220
Spinach	260
Swedes	2,770
Turnips	168
Watercress	2,752
Yams	680

Miscellaneous	
Canned Meats	6,477
Bacon	941
Sausage	120
Cheese	83
Cream	288
Rice	14
Frozen Foods	183
Yogurt	432
Preserves	587

Main causes for condemnation

The weight of meat and offal condemned from various causes specified was as follows:—

	Meat lbs.	Offal lbs.	Total Year ended 31st December **1973**	Total Year ended 31st December 1972
Tuberculosis	558	55	613	1,659
Decomposition	27,633	1,119	28,752	45,168
Decomposition bone taint	352	20	372	469
Injury	10,671	488	11,159	8,527
Abscess	14,995	251,184	266,179	179,607
Emaciation	1,594	60	1,654	992
Dropsy	20,619	1,340	21,959	22,298
Parasitic distomatosis ..	—	88,642	88,642	79,465
Parasitic hydated	—	24,177	24,177	17,882
Parasitic C. bovis	—	2,816	2,816	4,546
Mastitis	70	15	85	450
Metritis	173	—	173	—
Septicaemia	6,586	694	7,280	2,894
Pyaemia	9,835	446	10,281	3,845
Pneumonia	3,012	272	3,284	441
Pleurisy	6,504	13,015	19,519	6,169
Emphysema..	—	—	—	—
Pericarditis	486	688	1,174	799
Peritonitis	1,503	1,388	2,891	2,496
Enteritis	—	80	80	510
Nephritis	17	60	77	213
Uraemia	727	80	807	50
Arthritis	3,157	—	3,157	4,381
Actinomycosis	—	1,797	1,797	2,146
Necrosis	358	—	358	217
Contamination	23	18	41	448
Icterus	870	—	870	836
Pigmentation	14	356	370	503
Neoplasm	515	55	570	1,098
Swine Erysipelas	531	—	531	529
Fatty change	110	—	110	279
Abnormal odour	2,273	220	2,493	763
Moribund	447	37	484	943
Immaturity	575	—	575	155
Totals	lbs. 114,208	lbs. 389,122	lbs. 503,330 224·70 tons	lbs. 390,778 174·45 tons

The above includes meats surrendered at the Chief Inspector's Office and meat condemned at shops, warehouses etc., a total of 2·89 tons.

NOTE: The number of condemnations in respect of Tuberculosis was as follows:—

	Year ended	
Whole carcases of :	**1973**	1972
Beef	—	—
Pork	—	—
Part carcases and organs:		
Beef	—	—
Pork	39	104

FAMILY HEALTH SERVICE

Introduction

During the final year before reorganisation of the National Health Service, every member of staff was acutely conscious of the need to consolidate the Family Health Services so that they might withstand the inevitable changes of the future. Extensions to the existing services were put into operation, details of which appear in the reports under appropriate headings. These services included the opening of Varley Street Combined Clinic; immunization against rubella of day nursery, Health Department and the United Manchester Hospital staffs; cytology for hospital patients; the planning and operation of a vasectomy service; extension of the training courses in family planning to include general practitioners.

District Nursing

District Nursing over the years

Once more district nursing is at a turning point—the second in just 25 years. In 1948 district nursing as a voluntary service came to an end at the inception of the National Health Service. It became an integral part of the local health authority services, developing, expanding, constantly changing without surrendering its traditions. After such a brief period the association with local government is ending in 1974 and district nursing, along with other local authority and hospital nursing services will form part of an integrated nursing service for the community.

No community nursing service has a longer tradition than district nursing. In 1864 a group of Manchester philanthropists set up a voluntary service to nurse the sick poor in their own homes; this at a time when nurse training in hospital had only just started through the reforms of Florence Nightingale. The Manchester & Salford Sick Poor and Private Nursing Institution had to send the nurses it employed to St. Thomas's Hospital in London to be trained. One is filled with admiration in reading the early records of this voluntary nursing service and the spirit of dedicated service that animated both benefactors and nurses. 30 years on in 1896 we read in the Annual Report:

> "The work of the district nurse is such that it must appeal to the sympathies of every benevolent person; to help in the relief of suffering among those too poor to help themselves; to carry some rays of brightness into homes of the poor when all is darkened by the presence of pain and sorrow and the hands of friends tied down by unpitying poverty; to lift the weight of this oppression through the trained nurse's skilful help,—surely the support of such a mission requires no urgent commendation. The opportunity to help on that work is a privilege not to be passed".

Through the National Health Service Act 1946 district nursing along with many other services became a state service available free of charge to all who needed it. In Manchester full transfer to the local authority was delayed by ten years, the voluntary committee of the district nursing institution continuing to administer the district nursing service as an agent for the city. In 1958 Manchester Health Committee took complete responsibility for district nursing within its boundary, thus putting it on the same administrative footing as health visiting and midwifery.

The 15 years that followed have seen steady expansion and development of the service. In 1966 the first hospital liaison sister was introduced to Crumpsall Hospital Geriatric Unit and similar schemes followed in other hospitals. Also in the same year the district nurse training school was reorganised with a full-time tutor and has been expanding ever since.

The year 1967 saw the introduction of the night nursing service for seriously ill patients; with its inception the long standing hope of providing a 24-hour nursing service for the people of Manchester was realised. Meanwhile more and more nurses were being attached to general medical practices instead of "districts" in accordance with the national trend. In each case subsequent experience has justified these changes in district nursing organisation, proving of great benefit to those who matter most—patients and their families.

Report for 1973

During 1973 reorganisation of the management structure under the terms of the Mayston Report was completed. As with health visiting and midwifery, district nursing has been retained as a specialised nursing service under a Divisional Nursing Officer, responsible to the Director of Nursing. Reorganisation on a functional basis has meant a minimum of disruption to the Home Nursing Service. Certainly, skilled professional supervision by experienced district nurses at middle management level assured a high standard of patient care. Two area Nursing Officers were appointed to these posts, each responsible for one half of the city (north and south). In each area nursing teams were created under the leadership of a Nursing Officer who is responsible for the day-to-day management of the work. These nursing teams comprise varied skills and levels of responsibility: trained district sisters, state registered nurses, trainee district nurses, state enrolled nurses and bath attendants, hospital liaison sisters, practical work instructors and night nurses.

Statistics—General Nursing

	1973	1972
Patients on books 1st January	3,622	3,556
New cases attended	13,427	11,885
Total cases nursed	17,049	15,441
Total nursing visits	336,358	333,977
Total visits by bath attendants	24,418	23,884

Classification of patients and nursing visits

	1973		1972	
	Patients	*Visits*	*Patients*	*Visits*
General	4,828	139,320	4,584	139,463
Injections	4,327	82,756	4,513	94,001
Dressings	6,207	88,996	4,869	79,723
Miscellaneous	1,687	25,286	1,475	20,790
Totals	17,049	336,358	15,441	333,977

Classification of new cases

Age-groups	**1973**	1972
0–4 years	315	295
5–14 years	674	495
15–64 years	6,536	5,613
65 and over	5,902	5,482
Total	13,427	11,885

A comparison between 1972 and 1973 shows a far smaller increase in the number of visits than in the number of patients nursed which points to cases of shorter duration. This is borne out by a comparison between the increases in the total number of children, adults and old people nursed during the two years under consideration.

0–14 years—increase of 25% from 1972 to 1973

15–64 years—increase of 17% from 1972 to 1973

65 years and over—increase of 8·5% from 1972 to 1973

In other words there has been a shift from long term nursing to more acute work, accounted for by the further development during the year in hospital liaison and general practice attachment.

Staff employed at the end of December, 1973

Nursing staff:		
Divisional Nursing Officer	1	
District Nurse Tutor	1	
Community Nurse Tutor	1	
Area Nursing Officers	2	
Nursing Officers	11	
District Nurses	56·5	
State Registered Nurses	15	
Student District Nurses	7	
Clinic/Surgery Nurses	2	
State Enrolled Nurses	40	
		136·5
Bath Attendants		9·5
		146·0

Hospital liaison

No innovation in the district nursing service has been more important than the introduction of the hospital liaison scheme in 1966.

Standing on the threshold of the new health service, one can now see hospital liaison as the vital link between past and future, between the 'tripartate division' of 1946 and the integrated community health service of 1974.

By the mid-sixties a number of hospital authorities had become acutely aware that many patients were being retained in hospital beyond the point of requiring hospital care to their own great detriment. Through this new appreciation of the need for comprehensive treatment plans and continuity of patient care, early discharge from hospital became a possibility. No doubt a strong impetus was provided by the scarcity of hospital beds and the costliness of providing them, thus making it essential to achieve a quicker 'turnover' of hospital admissions. To discharge as many patients as possible, as early as possible, to the care of their own general medical practitioners and the district nurse, was seen as an essential step towards a more rational use of scarce resources and, at the same time, of great benefit to the patients concerned. Good work had already been done by a liaison health visitor at Crumpsall Hospital Geriatric Unit. In 1966 when the Consultant Geriatrician approached the Health Department for an additional health visitor, it was suggested to him that a liaison district nurse could make a valuable contribution to his team. The skills of the district nurse had not at this time been utilised anywhere in the field of hospital liaison. The Geriatrician agreed to this suggestion and plans were made for a pilot scheme. The staff of the district nursing service welcomed this appointment to put their nursing skills to fuller use and gave the plans their wholehearted co-operation.

Weekly meetings of all officers concerned were established in order to arrive at a joint assessment of the patient's needs and a decision on discharge and after-care. The liaison sister personally met each patient to be discharged and discussed the nursing care with the ward staff. A home visit was made to help patient and relatives to adjust to the new situation, after which nursing visits were handed over to the regular district nurse. If required, other supportive services were brought in, e.g. meals on wheels, home help.

District nurse liaison spread to other hospitals and by 1971 the following hospitals were attended by a liaison nursing sister:—

Crumpsall Hospital (Geriatric Unit)

Jewish Hospital General Hospital

Booth Hall Children's Hospital

United Manchester Hospitals
    Manchester Royal Infirmary
    Manchester Royal Eye Hospital
    St. Mary's Hospital
    Barnes Hospital

University Hospital, South Manchester
    Withington Hospital
    Burton House (Geriatric)

Wythenshawe Hospital

Hospital referrals—number of patients and age groups

Reason for referral	United Manchester Hospitals		University Hospital South Manchester (Withington Hospital)		Burton House (Geriatric Unit)		Wythenshawe Hospital		Crumpsall Hospital (Geriatric Unit)		Jewish Hospital		Booth Hall Hospital (Children)		Totals
Surgical		606		632		14		102				104		198	1,656
Dressings	296		204		14		54				67		57		
Removal of sutures/ clips	310		428				48				37		121		
Burns													20		
Medical		269		236		268		119		165		41		51	1,149
General nursing . .	96		75		94		36		79		26		1		
Injections	40		37		13		15		7		10				
Ophthalmic . .	31		2		1										
Other medical . .	1		40		50		13		49		5		5		
Assessments and supervisory . .	101		82		110		55		30				45		
Total		875		868		282		221		165		145		249	2,805
Age Groups:	Under 65 Over 65	610 265	Under 65 Over 65	607 261	Under 65 Over 65	15 267	Under 65 Over 65	112 109	Under 65 Over 65	2 163	Under 65 Over 65	69 76	0–1 2–5 6–10 11–16	37 70 101 41	Total 2,805

In general hospitals the liaison service predominates in the field of post-operative treatments such as dressings and removal of sutures. In the Children's Hospital, liaison with the district nursing service has proved particularly valuable by enabling young children to return to their parents care at an earlier date. Some children can return to school more quickly by not having to make long journeys to out-patients Department.

It can be seen, therefore, that a hospital/district nurse liaison does not only bring medical but also social and emotional benefits to the patient.

Night nursing service

The night nursing service is now in its seventh year and is well established as a continuation of the day district nursing service.

The problems experienced by the night service during the period from August 1971—February 1973, due to shortage of staff have now been resolved by the appointment of new staff, three full-time district nurses. The patients who continue to benefit from the service are the terminally ill, who require pain relieving injections, the acutely ill requiring antibiotic therapy, the chronic sick and the elderly patients "at risk". Through the operation of the night nursing service patients are able to be nursed at home who may otherwise have to go into hospital for treatment.

One instance which illustrates this is the case of a chronic, arthritic, female patient of 53 years. She has spent the last 18 months in a long stay ward. Over the years she has sustained multiple fractures, due to falls, and requires pain relieving injections. A colostomy and indwelling urethral catheter adds to her problems. She became depressed and was discharged home in her sister's charge for a "trial period". General care and injections are given by day and night district nurses. At present the situation is running smoothly.

One blind, infirm, very independent elderly lady of 94 has received visits from the night staff at intervals since the service commenced in 1967 and has had a nightly visit for the past two years. She is very appreciative.

During the period January–December, 1973, 357 patients have been nursed receiving a total of 3,813 visits. 842 of these were given injections, most of them also need general care. The remainder of this number all need varying degrees of general care.

The night service continues to be appreciated by relatives and patients alike. It also provides a great deal of job satisfaction for the night nursing staff.

Marie Curie Memorial Foundation

Since 1965 the Area Grants Scheme of the Marie Curie Foundation has been available for district nurses to help their patients suffering from cancer. The scheme makes provision for extra nourishment and comforts which are not available from other sources.

This year following an approach from the Foundation to the health department the day and night service was introduced in October. The costs involved in maintaining this service are fully covered by the Foundation. The aim of the scheme is to assist relatives of cancer patients nursed at home, to obtain adequate rest periods from the responsibilities of nursing, in addition to caring for those who live alone. It is during the night hours that relatives appreciate the help that this service has to offer.

One patient aged 52 years who suffered from lung cancer was helped on three successive nights prior to her death. Relatives were so emotionally upset at this terminal stage of her illness, that whilst anxious to nurse her at home, found it quite impossible to cope both night and day.

District Nurse attachment to general practitioners

The attachment of district nurses to group medical practices has been extended during the year. All those medical practitioners willing and able to work with the district nurse are now participating in the group practice schemes. This includes mostly those doctors associated in groups of three or more, which makes the attachment of a nurse easier than the single doctor practice.

In a number of practices a trained district sister is now working together with a state enrolled nurse each making the contribution most appropriate to her training.

The number of practices in the City with district nurse attachment now totals 66 involving 195 doctors and 103 district nurses of both grades. This leaves 16·5 nurses, full time and part time, working on a territorial basis, including three on permanent night duty.

Within the Manchester area there are 260 doctors with practices in the city, yet only 195 doctors are involved in attachment schemes. The real gap is even greater, for these figures do not take account of the general practitioners whose practices are situated outside the city boundaries but who have Manchester patients on their lists. It is quite clear that there can be little increase in attachment schemes without additional nursing staff.

In the future Health Service the medical group practice situated in a Health Centre is likely to be the operational unit for the field worker in the community nursing service. What started as an experiment has now become an established practice and a pointer to the future pattern of community care.

District nurse training

The theoretical syllabus of district nurse training courses is intended to provide for the teaching of essential principles and serve as a foundation for the nurse's subsequent work in the field. It is therefore important that practical instruction should be given by adequately prepared instructors in the community setting and not solely during lecture and tutorial sessions. Although taught separately, it is important that the close relationship between district nursing theory and practice should be demonstrated to the students.

Training should reflect the needs of the community nursing service which is a 24 hour—7 day week service and students should gain experience in week-end and evening duties as part of the course. It is essential too, that the nurse becomes aware of the total needs of the patient and the family when planning a programme of care and has the ability to assess the nursing support required, taking into account the impact of the patient's physical and social environment on his illness or handicap. The training aims to stimulate and increase this awareness and where practical should be adapted to suit the needs of individual students. The district nurse's role in the promotion of health and prevention of ill health, in conjunction with that of the health visitor, cannot be over-emphasised and the training should incorporate this function.

Knowledge of basic teaching skills and an understanding of management function are an asset to the trained district nurse if she is to have the ability to determine priority needs and to delegate efficiently to all grades of staff. These aspects are included in the training programme and the students are also given insight into the role and function of other members of the health team. This helps them to understand how their role complements other members of the primary health care team, for the ultimate benefit of the patients and their families.

During the year three courses of training leading to the National Examination in District Nursing have been held. This shows an increase in the number of nurses coming forward for training in the area, as against last year, when only two courses were held. It is envisaged in the future that the training courses will continue to expand and that the three courses to be held annually will have to be utilised to the full by all the areas who participate in the theoretical training programme held in Manchester.

In all forty-three students have undertaken district nurse training during the past twelve months. Bolton, Bury, Rochdale, Salford and Stockport have continued to participate in the Manchester training programme and the catchment area has been increased to include students from Oldham and Wigan. As in past years, all the students have received the practical training and instruction in their own areas.

During 1973 twenty-three students were from the Manchester area. Twenty-five of the students have been successful in passing the National Examination and have been awarded the National Certificate in District Nursing. The eighteen other students are waiting to take the written examination on 10th January, 1974.

Enrolled nurses

Two courses of instruction for state enrolled nurses have been held during 1973. Altogether twenty-two students have participated. Thirteen of the students were from Manchester, four from Salford, three from Stockport and two from Wigan. Ten candidates have been successful in passing the National Examination (S.E.N.) and have been awarded the National Certificate in District Nursing (S.E.N.). The other twelve students will be taking the written examination on 10th January, 1974.

All the enrolled nurses have participated enthusiastically in the training courses and made valuable vocal contributions in the classroom. The theoretical instruction includes teaching sessions about the health, welfare and social services including responsibilities towards general practitioners and other colleagues. The importance of record keeping as a means of ensuring continuity of patient care is also emphasised.

Nursing in the home is an important section of the theoretical training programme and reference is made to the nursing of patients with cancer, diabetes, prolonged and terminal illness and many other diseases which the district nurse is likely to come into contact with. Visits of observation, films and discussions are included in the training programme to supplement the information given by more formal teaching methods.

Bachelor of Nursing course—University of Manchester

As in previous years, Manchester has continued to provide placements and practical training in district nursing for Bachelor of Nursing students. The introductory period of practical experience during the first year aims to orientate the students towards the health and social services, both statutory and voluntary, which are available in the community and can be utilised as part of total patient care. In addition the contribution made by the district nursing services to the care of patients in their own homes is highlighted.

Various aspects of patient care in the home are introduced throughout the 4 year course appropriate to the students stage in training so that, by the final district nursing placement, the student should be gaining experience in district management under supervision. The 4th year block placement also includes the final assessment of the students' practical work and potential in the district nursing field.

In-Service training

Orientation courses

In July of this year, orientation courses were commenced for new members of the district nursing staff both state registered and state enrolled nurses.

The courses are held at six weekly intervals, so that the nurses will not be on the district too long, before having the opportunity to attend an introductory course. The aims of the course are to introduce new staff to the workings of the district nursing service and to help them adapt to nursing patients in their own homes.

The programme is of five days duration and is comprised of three study days held at the District Nurse Training School, Beech Mount, Harpurhey, interspersed with two days spent observing the work of a trained district nurse in the community. During the lecture programme the students are shown how to adapt their nursing skills learnt in hospital to working in the patients' homes by means of practical demonstrations of district nursing techniques, followed by discussion and student participation. Talks are given on a variety of subjects—for example—record keeping, admitting new patients and the role of other workers in the community. The nursing officers and practical work instructors all participate in the lecture programme on a rota basis.

All staff including full time and part-time staff are eligible to attend these courses, including those part-time staff who for domestic or personal reasons have been unable to take the district nurse training courses. All participants have found this introductory course helpful and feel it has given them insight into their role as district nurses. In many instances the course appears to have stimulated the nurses' curiosity and many are anxious to have their knowledge extended in the subsequent district nurse training course.

Three courses for State Registered Nurses and two courses for state enrolled nurses have been held up to date and in all fourteen, S.R.N.'s and nine S.E.N.'s have participated.

Bath attendants courses

A bath attendants introductory course was held during October, 1973 for one week. Practical experience, visiting patients in their own homes with a senior district nurse, was integrated with talks, films, discussions and practical demonstrations which were held in the classroom. The aim of the course was to give the bath attendants insight into the community services available and understanding of their role as a member of the district nursing team.

Although the course was small in number the bath attendants who attended participated well, made some constructive criticisms and felt the course was helpful in preparing them for their work in the community.

Practical work instructor's course

A follow-up study day to the first practical work instructor's course held in Manchester during November, 1972 was held on 1st May, 1973. This proved to be a lively session where more informal teaching methods were used and there was plenty of student participation. The group, as a whole, welcomed the opportunity to meet together again, as many of them had just completed training a district nurse student for the first time. They had the opportunity to pool their knowledge and discuss problems and difficulties of mutual concern; an instructive and informative day which was appreciated by all who attended.

The second practical work instructor's course was held during the week commencing Monday 14th May, 1973 and a third one is planned for January, 1974. The programme followed similar lines to the first course but was slightly modified to include more group discussions and student involvement. Thirteen nurses participated and these included six from Manchester, two each from Bury, Salford and Stockport, and one from Wigan.

During the evaluation of the course, the students expressed their appreciation and overall had found the course both interesting and helpful.

Student nurse training for the general register

1969 syllabus—community option

At present we are living in a time of constant change and nurse training is no exception to this general trend. Periodically the syllabus for the training of nurses is reviewed and modified to meet the needs of an ever changing society.

During 1969, the General Nursing Council modified the syllabus for the student nurse to include a specialist subject in their training. There are four specialist subjects included within the syllabus:—psychiatric nursing, obstetric nursing, geriatric nursing and community nursing. The student nurse can elect to study any one of these options during her three-year period of training.

For a period of two years negotiations took place between representatives of the Health Department, the Hospitals and the Area Nurse Training Committee to establish a course for student nurses from the Manchester area to take the community nursing option.

Following the discussions a scheme was incorporated whereby the department would accept student nurses for training in community care. The four hospitals within the Manchester area, (Manchester Royal Infirmary, Crumpsall Hospital, Withington Hospital and Wythenshawe Hospital), were invited to send students for such training.

The training, which is for a period of six weeks (30 days), is repeated six times per year, each course taking a maximum of sixteen students. For the student to derive the most benefit it was thought that this option should be taken during the latter one-third of the student nurse's training.

The objectives of the training are to enable the student nurse to adapt the skills learnt in hospital to nursing of the sick and handicapped in the community; to recognise the social and nursing needs of the patient and the family and to give the student nurse an insight into social and community services.

Establishment

Community Nurse Tutor	1
Administrative Assistant	1

The first of the courses was held in April, attended by six student nurses from Withington Hospital. Further courses were held during the year, commencing in June, July and September. In all, 35 student nurses were seconded to the department for community care experience.

	9th April 18th May	4th June 13th July	30th July 7th Sept.	24th Sept. 2nd Nov.	Total
Withington Hospital	6	6	5	6	23
Crumpsall Hospital	—	—	3	5	8
Manchester Royal Infirmary	—	—	4	—	4
Wythenshawe Hospital	—	—	—	—	—
	6	6	12	11	35

The experience gained by the student nurses whilst they were seconded to the department is as follows:—

Study Block	5 days
District Nursing	7 days
Health Visiting	7 days
Midwives	1 day
Social Services Department	5 days
Study Days	5 days
Total	30 days

By kind permission of the chief nursing officer at United Manchester Hospitals, the 5-day study blocks were held in the School of Nursing, Manchester Royal Infirmary. Being fairly centrally situated in the City, Beswick Health Centre is used for the study day sessions.

The introductory block is used to give the students a background and an insight into the observation and experience which they are going to gain during the course. Observation visits into patients' homes with district nurses, state enrolled nurses, bath attendants, health visitors, school nurses and midwives give the student nurse a broad picture of the services that are available to the patient and the family. Other aspects of the work comprised: observation with general practitioner attachment, clinic nurses, medical officers involved in developmental paediatric assessments, screening sessions, baby and toddler clinics and ante-natal clinics.

The programme of observation and experience with the Social Services Department is organised separately by the training officer for Social Services.

There is no examination at the end of the course but each student is assessed by the tutor and fieldworkers and a report returned to the hospital.

In most cases, the objective of the course was achieved. With this experience the students feel that their knowledge has been broadened and instead of seeing patients in isolation they now see them in a much wider context, being part of society and, most of all, belonging to a family.

Shortened courses in community care

Provision is also made for experience in community nursing for those students who have not elected to take the community option.

Observation and experience for these courses is limited to five days:—

Study	1½ days
District nurse	1½ days
Health visitor	1 day
Midwife	1 day
	5 days

Six courses have been arranged for the year, in all 72 students from three hospitals taking part in the scheme.

	Week commencing						Total
	29.1.73	12.11.73	19.11.73	26.11.73	3.12.73	10.12.73	
Withington Hospital	4	4	4	4	4	4	24
Crumpsall Hospital	—	6	6	5	5	6	28
Wythenshawe Hospital	—	4	4	4	4	4	20
Manchester Royal Infirmary	—	—	—	—	—	—	—
	4	14	14	13	13	14	72

This scheme is advantageous for the student nurse because it gives a continuous experience compared with the fragmented observations which have been the pattern in the past.

Health Visiting

The history of health visiting in Manchester makes fascinating reading and as preparations are being completed for the integration of the health services it is well to reflect on this branch of nursing which was established in the City of Manchester as far back as 1862 by a group of ladies concerned with the health education of the poor in their own homes. They were the Ladies Sanitary Reform Association who undertook the mammoth task of reducing the infant mortality rate and improving the health of the children by their teaching.

Although the value of their work was recognised by the Corporation in 1890 and spread to other towns health visitors did not receive statutory recognition until 1946 when the National Health Service Act set out the general scope of their work.

There is no doubt as to the value of the work done by health visitors over the years. The Annual Reports of successive Medical Officers of Health pay tribute to their achievements, particularly in the control of infectious diseases. Measles for many years was the despair of public health and had a high mortality rate. It was made notifiable in 1915 and health visitors were given the task of visiting cases and advising on management. As a result the death rate fell dramatically and the medical officer of health reporting this said that their work was admirable.

In 1911 an investigation into the work of health visitors had been undertaken as it was felt difficult to gauge the value of health visitors work in relation to the reduction of infant mortality. No one cause had led to a reduction of the rate "but unquestionably much had been due to the house to house visits of health visitors and to the associated education of mothers at child health centres". It was recognised that health visitors had to be trained nurses with special training in social aspects of diseases. The responsibility for training was with the Royal Society of Health until 1962 when the Council for Training of Health Visitors was established. This has resulted in an improved system and quality of training.

The health visitors' scope of work has grown over the years keeping pace with the changes in society and with the developments in preventive medicine. Her basic duty today is unchanged from that of her predecessors who laid the foundations of the service.

The health visitor must always bear in mind that her function is primarily preventive—to so care for those in her area that ultimately the visits to and by the doctor with whom she works closely will be reduced in number. She must not be hampered in this characteristic and preventive work such as encouraging immunisation, undertaking screening tests etc., by dealing with cases mainly of a social nature which are frequently referred to her, and which can dissipate her skills.

There have never been as many health visitors as are required and this year has been no exception. Only eight health visitors qualified in 1973 to replace 16 health visitors who retired or left the service. However, 18 sponsored students were enrolled for training and 7 qualified health visitors joined the staff during the year. As in other parts of the country there is an increase in applicants for training which is encouraging.

During the year two of the group advisors were appointed as Area Nursing Officers and 10 Nursing Officers were appointed from the staff so completing the establishment of the Mayston Structure of Management with the Division.

The approved establishment in the health visitors section and the numbers employed at the end of the year were as follows:—

	Approved establishment	*Employed (approximate wholetime equivalent)*
Divisional Nursing Officer ..	1	1
Area Nursing Officer	2	2
Nursing Officer	13	10
Health Visitor (full-time)	104	60
Health Visitor (part-time) ..	—	10·5
School/Clinic nurse (full-time) ..	85	65
School/Clinic nurse (part-time) ..	—	12
Town Hall clinic sister	1	1

In-service training

For the past 33 years an annual refresher course for health visitors, school nurses and others engaged in health education has been organised by the Health Visiting Section to which representatives of other local authorities were invited. It was decided this year not to hold such a course as staff of all local authorities had to give priority to management and integration courses prior to the re-organisation of the health services in 1974.

The local authority arranged preparatory courses in co-operation with the Regional Hospital Board and Manchester Polytechnic. Not least of the advantages of these courses was the opportunity afforded to staff to meet nurses from the various branches of nursing in the community and in the hospitals, together with non-nursing personnel working in the health service.

Conferences and post-graduate courses

Organisation	Place	Title	Duration of Course	Numbers attending
Manchester Polytechnic	Manchester	Integration	5 days	18 health visitors and school nurses
Manchester Polytechnic	Manchester	Fieldwork Instructors Course	30 days	4 health visitors
Department of Audiology	Manchester	Screening Tests of Hearing	6 days	7 health visitors
Health Visitors Association	Brighton	Annual Conference	3 days	1 nursing officer
Castle Priory College	Wallingford	Spina-Bifida	5 days	2 school nurses

General Practitioner Attachment

This is an aspect of health visiting activity which has increased significantly since its inception several years ago.

From somewhat tentative beginnings in 1968 when the first health visitor had her case-load related to a group of doctors cases it has gone from strength to strength so that in 1973 there were 65 health visitors working with 161 doctors in 41 group practices.

In every case the doctors have requested liaison; the work of the health visitor has been fully discussed and her progress in the practice appraised.

Total attachment has proved impossible to achieve without detriment to the work because of shortage of staff. There is unavoidable difficulty where the health visitor has to cover a wide area and is no longer associated with a particular district. There is, however, a mutual advantage arising from the scheme when cases referred to the health visitors are appropriate to her individual skills and she has access to medical records when necessary. This has led to a better understanding of the roles played by both doctors and health visitor with a resultant improvement in the care of the patients.

Hospital liaison

The liaison health visitor is a valuable bridge between the hospital staff and the area health visitor. This means that after-care can be carried out more quickly and more efficiently. She can, for example, by contacting the area health visitor help in tracing babies who have failed to attend follow-up clinics and mothers who have neglected to attend for appointments. Again through contact with the area health visitor she can provide the hospital staff with useful information regarding the home background and social problems of patients in hospitals, matters often of fundamental importance in treatment. This is only to touch on some of the aspects of this type of liaison but the more it is adopted the more valuable it is recognised to be. Liaison with health visitors is established at the following:

St. Luke's Clinic (venereal disease)
The Chest Clinic (Denmark Road)
St. Mary's Hospital—Paediatric Unit
Withington Maternity Hospital and Paediatric Clinic
Wythenshawe Maternity Hospital, Special Care Unit and Paediatric Clinic
Wythenshawe Hospital—Chest Clinic
Booth Hall Hospital for Children
Crumpsall Maternity Hospital
Crumpsall Hospital—Geriatric Unit
Monsall Infectious Diseases Hospital
The Duchess of York Hospital for Babies
Gartside Street Out-Patients Clinic and Pendlebury Hospital

Prevention of accidents

Accident prevention is one of the major aspects of the health visitors work since preventive medicine is generally accepted to be of greater value than therapeutic medicine.

Propaganda plays a large part in this and posters are on display at all clinics and health centres warning parents to be constantly vigilant. Vigilence is indeed the watchword and health visitors are accustomed in the course of routine home visits to warn mothers to be on their guard, to make sure that medicines and poisons, such as detergents and bleaches are placed safely out of the reach of children; that leads from electric appliances are not a hazard to the unwary and that fireguards are in constant use.

Health visitors make a practice of encouraging mothers to send their children to the organised playgrounds which are of great educational and recreational value to the children. The more children who attend these playgroups the less accidents there will be as a result of very young children playing in the streets.

Notification of births, 1973

The total number of notifications adjusted by transfer was 7,026 comprising 6,938 live births and 88 stillbirths.

Care of aged and infirm persons

The aged and infirm population increases with the longer life-span which has resulted from improved standards of living and medicine. This in turn results in a need for increasing support to numbers of elderly persons who frequently live alone. Many have medical and social needs and it is often difficult to decide which is the most appropriate agency to take responsibility for individual cases.

Every effort is made to ensure that duplication of visiting is avoided and this depends on good communications between social workers, health visitors and district nurses.

The health visitors associated with clinic nurses visit those cases requiring health advice particularly on discharge from hospital. Supervision of diets is one of the most important aspects of the work and many are encouraged to attend luncheon clubs throughout the city. Attachment of staff to general practitioners greatly facilitates identification of cases in need of visiting and the liaison with Geriatric units has been of inestimable value in ensuring the follow-up of cases on discharge and those cases in most urgent need of admission to hospital.

Some elderly people refuse to accept proffered help. Unfortunately there were three extreme examples of this during the year. In each case, when all else had failed, it was necessary to take action under Section 47 of the National Assistance Act and remove them compulsorily from their home. By contrast other elderly people due to loneliness are loath for the health visitor to terminate her visit. Patience and understanding are needed in all aspects of health visiting but never more so than in the care of the elderly.

There were 726 new patients referred to the department, compared with 982 respectively in 1972.

The following statistics include comparable data from 1972:—

	1973	1972
Voluntary admissions to hospitals	187	169
Admitted to nursing homes	6	40
Transferred to:		
Social Services	105	76
Other services	41	45
Died at home	244	192
Removed to care of relatives	17	—
Compulsory removal	3	1
No further action necessary	91	76
No trace	33	26
Removed outside Manchester area	32	72
Carried forward	2,353	2,386
Total cases dealt with:	4,908	5,314

Midwifery

Introduction

This will be the final report on the Midwifery Service in the City of Manchester as a result of the change in the structure of the National Health Service which comes into effect 1st April, 1974.

It is interesting to look back to 1902 to see how the service has changed and developed during this time.

In 1902 the first Midwives Act was passed which revolutionised midwifery. State Registration became compulsory by law. This sanctioned the setting up of the Central Midwives Board, which was authorised to frame rules regulating the training and practice of midwives, to conduct examinations, and maintain a roll of persons who were awarded its certificate, thus providing trained midwives, carrying out a code of practice as laid down by the Board. The actual duty of supervision became the responsibility of the Local Authority.

A Registered Medical Practitioner was appointed in 1905 by the City of Manchester to carry out these duties, which resulted in a lowering of infection in the mother and baby.

Up to this time there had been little care given to the mother during the ante-natal, labour, and post-natal period—handy women were in great demand, receiving a few coppers in payment from the family for their services. The year 1936 marked another step towards a better service. At this time it became the duty of the Local Authority to employ sufficient midwives to attend women confined at home resident in their area. For the service of a midwife, a woman having her first confinement paid two pounds, and thirty-five shillings was charged for subsequent confinements. In addition Manchester Corporation paid these independent midwives a fee of ten shillings for each case. During the next ten years, most midwives were employed on a salaried basis.

Up to the implementation of the 1946 National Health Act, ante-natal care was carried out by midwives in their own homes. Only a few child welfare centres provided facilities for this work.

Little help had been given to mothers during labour until 1948, when Gas and Air Analgesia equipment was issued to all municipal midwives.

Domiciliary midwives were 'on call' twenty-four hours each day, having only half a day off duty in the week, most of them using bicycles to cover their area of work.

With the post war building and planning which followed the return to peace, child welfare centres were further developed, and midwives were encouraged to hold their clinics there.

Labour was made easier for the mother, by the introduction of Pethidine and the Emotryl Trilene Apparatus. Mothercraft and relaxation classes were held in centres throughout the City. Oxygen apparatus was issued to all domiciliary midwives for resuscitation of the baby when necessary.

From 1950 to the present day there has been a continuous decline in home confinements, but the work load of the domiciliary midwife has increased considerably in other fields.

There has been a marked increase in hospital confinements with a greater emphasis on ante-natal care and quicker and earlier hospitalisation of potentially abnormal cases. This has led to a demand by mothers for early transfer from hospital to home, into the care of the domiciliary midwife.

Midwifery 1973

During the year there were 7,026 births to Manchester citizens notified in the City, a decrease of 1,059. This gave a birth rate of 00·0 per 1,000 population against 14·2 on 1972.

There was a continuing decrease in domiciliary confinements, the number being 254 compared with 458 in 1972, but domiciliary midwives continue to be responsible for the deliveries in the general practitioner unit.

Mayston structure

The implementation of the Mayston structure in the Midwifery Service was commenced in January by the appointment of two area nursing officers, and completed in May by the appointment of five nursing officers. Three nursing officers are responsible for midwifery teams in the North, Central and South districts of the City, one for the general practitioner unit at St. Mary's Hospital and one has special responsibility for the family planning services.

The new system is now working satisfactorily to the advantage of both patient and the midwife.

Although the numbers of home confinements have decreased, midwives are enlarging their sphere of duties and are working towards integration by taking an active part in the mothercraft teaching at three of the maternity hospitals in the City and nursing officers and midwives are welcomed on the wards and in the ante-natal clinics where they frequently visit to discuss patient care.

Supervision of midwives

This statutory duty is now shared by the two area nursing officers.

Visits were made as follows:—	**1973**	1972
To maternal and child health centres	108	105
To hospitals	39	35
Lectures given	13	8
Meetings attended	11	3
Supervisions	53	154
To midwives in own home	29	52
Routine inspections	20	70
Visits to Pye (R/T's)	53	60
Ambulance depot	7	2
Visits to family planning clinics	38	101
Visits to St. Mary's general practitioners unit	35	51
Visits to general practitioners surgeries	2	2
Brunswick Health Centre (Prems)	9	—

Municipal midwives

The establishment provides for 74 midwives. At the end of the year there were 43 full-time and 16 part-time midwives in post.

For the first time for many years it has proved difficult to recruit staff, possibly due to some uncertainty about the future pattern of work after re-organisation. However, there has been a considerable decrease in the number of visits made, but there have been 10 fewer midwives to make these visits.

The work of the midwives is as follows:—

	1973	1972
Antenatal visits to patients in their own homes	2,990	4,057
Nursing visits to booked patients	4,087	8,080
Nursing visits to hospital patients	43,919	48,808
Visits for home assessment	6,687	6,774
Visits to patients in early labour	643	888
Domiciliary family planning	24	2
Antenatal clinic sessions	2,019	2,488
Relaxation talk/sessions	519	—

As well as these duties, the midwives take blood specimens from mothers attending antenatal clinics, and from babies for the Scriver test for metabolic disease. They staffed the general practitioner unit and were responsible for the training of pupil midwives and for students who accompanied them on observation visits. They attended antenatal clinics at medical centres and doctors' surgeries. They staffed 28 family planning clinics at 17 centres. An average total of 5·5 midwives undertook duties for family planning purposes. Two training programmes were carried out and this involved a further number of midwives for staffing clinics. Midwives attended 2,350 sessions in 1973 compared with 2,373 in 1972. They also attended 32 mothers whose babies were born before the arrival of a midwife or the ambulance. Twenty-three of these were booked for hospital, six were booked at home and three had no antenatal care of any kind.

There were 391 expectant mothers who booked a midwife for home confinement; there were 137 cancellations for the following reasons:—

	Number of mothers
Booked for St. Mary's G.P. Unit	5
Booked other hospitals	29
Left Manchester	17
Due to medical conditions	35
Miscarried	3
Social reasons	15
Ante-partum haemorrhage	00
Anaemia	14
Twin pregnancy	2
Pre-eclampsia toxaemia	1
Premature labour	8
Delayed labour	8

Antenatal care

Seventeen clinics were held weekly but due to the decrease in home confinements, attendances were poor. Midwives made 2,019 attendances at clinics and visited 2,990 mothers at home during the antenatal period.

Some of these antenatal visits were made to hospital defaulters at the request of the hospital clinic staff. A full antenatal examination was carried out on these patients and a report sent to the hospitals.

As well as assisting in mothercraft classes at the hospitals and in the clinics, midwives offered practical antenatal advice when carrying out the home assessment, particularly with regard to heating and preparation for homecoming.

Fourteen general practitioners held antenatal clinics at their surgeries assisted by the midwife.

Deliveries

The analysis of births in the City according to place of delivery was as follows:—

Domiciliary	General practitioner unit		Institution	Maternity home	Total
	St. Mary's hospital	Crumpsall hospital			
254	245	4	10,811	237	11,692

The number of births notified within the City was 11,692, a decrease of 382, 4,815 were to mothers resident outside Manchester and 179 mothers were delivered outside the City.

Stillbirths

There were 84 notified stillbirths within the City compared with 105 in 1972. Four occurred within the domiciliary practice.

Following the usual practice in hospitals, all babies born either at home or in the general practitioners unit were screened for congenital dislocation of the hip and for the cytomegalovirus.

Hospital discharges

The scheme remained unchanged and 5,164 mothers were discharged before the ninth day, the midwives continuing to care for the mothers until the 21st day. A total of 1,121 was discharged after the ninth day.

The Scriver test for the detection of metabolic disorders was carried out on all babies on the 10th day.

Transfers home from hospital after delivery is based according to the patients needs and on the home circumstances. Numbers are as follows:—

Day	1	2	3	4	5	6	7	8	9	10 and over
Number	22	241	1,335	621	748	727	1,073	397	334	787

Training and educational activities

Forty-three domiciliary midwives are approved by the Central Midwives Board to undertake the training of pupil midwives.

These pupils come from:—

St. Mary's Hospital	31
Withington Hospital	14
Crumpsall Hospital	11

Observers came to the department for additional training and these include:–

Obstetric nurses	99
Community nurses	104 from the general hospitals
Student health visitors	2
Student district nurses	16
Degree course students ..	14
Diatetic students	10

Seventeen midwives attended the compulsory post graduate course under rule G2 of the Central Midwives Board.

Three midwives were trained in family planning. This made available 24 full time midwives and nine part time midwives trained to assist in the 28 weekly family planning clinics.

Saint Mary's general practitioner unit

This unit of 25 beds and two labour wards continued to be staffed by domiciliary midwives with auxiliary staff from St. Mary's. It has been operational since 1971 and staffed by midwives on an eight hour shift with a nursing officer in charge. All full time midwives assisted in the duties on the unit. An average of five and three quarter midwives undertook these duties during the year.

Although the future of this unit comes up for review from time to time, it continues to give a very satisfactory service to the patient and is much appreciated by those general practitioners who wish to give total care to their patients, supported by the domiciliary midwives who work closely with them. It provides excellent experience for the pupil midwives working under the supervision of a domiciliary midwife, to give full community care as well as a hospital delivery to her booked patient.

	1972	**1973**
Total admissions	407	368
Total deliveries	292	265
Manchester residents	256	230
Non-Manchester residents	36	35

Antenatal cancellations were made for the following reasons:—

Aborted	11
Changed to home booking	4
Changed to other hospitals	5
Removals	22
	42

Transfers to the consultant unit were made for the following reasons:—

Antenatal	
Pre-eclamptic toxaemia	14
Post-maturity	38
Ante-partum haemorrhage	14
Premature labour	3
Rhesus negative with antibodies	1
Unstable lie	1
Breech presentations	12
Other medical conditions	8
Twin pregnancy	1
Other abnormalities	2
	94
In labour	
Delay in labour	16
Premature labour	1
Pre-eclampsia	6
Ante-partum haemorrhage	4
Foetal distress	6
Malpresentation	5
Early rupture of membranes	14
Twin pregnancy	1
Admitted to consultant unit in error	1
Transferred postnatally	
Tubal ligation	4
Post-partum haemorrhage	2
Retained placenta	1
Other complications	2

Most of the patients transferred in labour and postnatally were transferred back to the unit for nursing until discharge. Transfer home was arranged according to the patient's needs and the advice of the patient's practitioner and midwife.

The following table gives a summary of day of discharge and place of residence.

	1	2	3	4	5	6	7	8	9	10+
Manchester Residents ..	3	31	120	38	26	25	11	7	4	8
Non-Manchester Residents ..	0	2	22	4	3	2	5	0	0	0

All homes are assessed through the co-operation of the domiciliary midwife and because of more frequent use of the unit by the midwife, liaison between district and hospital staff has continued to improve, particularly with the antenatal clinic staff.

Mothercraft and postnatal exercises have been continued and some success has been achieved by encouraging expectant mothers to attend the unit in the antenatal period for talks on parentcraft and to show the mothers the layout of the unit.

Premature baby service

There were six midwives trained in the care of premature and ill babies in post at the end of the year, one having left the service at the end of October.

Of the 867 babies referred to the premature baby staff, 29 babies were discharged from hospital against medical advice, an increase from 25 in 1972.

Despite the rehousing programme in Manchester there has been a further increase in homes visited where the standard for adequate care of the premature baby is still unsatisfactory. From these homes, two infants were re-admitted to hospital because of insufficient heating and one due to neglect by the mother, but over all the number of babies re-admitted to hospital has reduced from 29 to 14. Second and third visits daily have been found necessary in this type of home.

The need for loaning hot water bottles and blankets, and the giving of second hand clothing and dried milk continues to be an essential factor in the well-being of many of these infants.

Of the 867 premature babies referred to the department 90 of these were cared for by the district midwives under supervision of the senior premature baby sister. This was due to a depleted staff because of sickness and accounts for a reduction in the number of visits made by the service.

With the implementation of the Mayston structure, liaison between the various departments has increased.

The following case history outlines some of the problems encountered and how the integration of services helped.

A premature baby birth weight 4 lb. 10 ozs. was discharged home from the Special Care Unit on the 26th day weighing 5 lb.

Prior to discharge two appointments had been made with the parents (father 21 years old, mother 19 years) to assess the home conditions but no access was gained. The father told the staff at the hospital he was not having anyone snooping in his house. The baby was taken home against medical advice.

On the first visit the mother was unco-operative and both parents hostile. The accommodation consisted of a basement bed sitter with kitchen attached. On the second visit, the premature baby sister met the mother at the door. Her husband had locked her out the previous evening. The premature baby sister was also refused admission. A police constable who had been called by the mother was eventually allowed in with the premature baby sister. Baby had a sticky eye and nasal discharge but was warm.

The general practitioner was contacted and later visited accompanied by the premature baby sister and two policewomen. Arrangements were made for the baby to be admitted to a special care unit for a few days, but when transport arrived the father had taken baby out.

Eight visits were made in forty-eight hours to ensure the baby was fed and cared for. The mother was contacted by the police but refused to come home. At 8 p.m. on the second day the premature baby sister visited the mother ten miles away at her sister's home and asked her to return home and talk things over. She returned and stayed.

On subsequent visits neither parent was up before 1.00 p.m. and although confidence was gained, they both remained immature and unaware of their own inadequacies. Two visits were made for several days and then daily until the baby reached a weight of 6 lb. 8 ozs.

During this period the family had been visited by the Social Services to whom the family were already known (the father being on probation).

The baby was discharged to the health visitor, but a weekly follow up visit was made by the premature baby sister to ensure the weight gain was satisfactory, both parents refusing to take the infant to the clinic.

Good liaison continued between hospital and domiciliary staff. A premature baby sister visited all maternity hospitals most weeks to be present when the consultant paediatrician held his out-patient clinic and/or accompanied him on his round of the special baby care unit.

During the year 140 student nurses accompanied the premature baby sisters on their visits to gain an insight on community care for premature babies.

A summary of visits is given as follows:—

	1973	1972
To mothers and babies under 21 days ..	4,681	4,774
To mothers and babies over and including 21 days..	3,408	3,022
To paediatric clinics	118	182
To hospitals other than clinics	145	165
To child health clinics	118	192
To general practitioners' surgeries	135	164
General practitioner units	41	50
Family planning clinics	23	—
Home assessments	475	525

An analysis, by birth weight, of the premature infants referred for care, together with the numbers transferred to hospital whilst in the care of the premature baby sisters, is given below:—

Weight at birth	B. Weight	A. Weight	Survived	Deaths	Transferred to hospital
Under 3 lb. 4 ozs... ..	16	0	16	–	–
3 lb. 4 ozs.—4 lb. 6 ozs. ..	80	3	77	3	6
4 lb. 7 ozs.—4 lb. 15 ozs.	125	33	122	3	3
5 lb. 0 ozs.—5 lb. 8 ozs. ..	273	350	271	2	4
5 lb. 9 ozs. and over ..	349	471	349	–	1
Totals			835	8	14

Feeding established on discharge of the babies was as follows:—

Breast fed	45
Artificially fed	548
Breast and complement fed	28

Fourteen babies known to have been transferred to hospital for the following reasons:—

Congenital abnormality of oesophagus ..	1
Urinary infection	2
Gastro enteritis	2
Bronchopneumonia	2
Congenital abnormality of nose	1
Anaemia	1
Hypothermia	2
Cerebral haemorrhage	1
Gastro interstinal thrush	1

Of eight babies known to have died, the registered causes of death were as follows:—

Pneumonia..	2
Acute bronchitis	1
Hepatic failure	1
Cerebral venous thrombosis	1
Gastro enteritis	1
Bronchopneumonia	2

Weight at birth	Premature live births												Premature stillbirths	
	Born in hospital				Born at home or in a nursing home									
					Nursed, entirely at home or in a nursing home				Transferred to hospital on or before 28th day					
		Died				Died				Died			Born	
	Total births (1)	within 24 hours of birth (2)	in 1 and under 7 days (3)	in 7 and under 28 days (4)	Total births (5)	within 24 hours of birth (6)	in 1 and under 7 days (7)	in 7 and under 28 days (8)	Total births (9)	within 24 hours of birth (10)	in 1 and under 7 days (11)	in 7 and under 28 days (12)	in hospital (13)	at home or in a nursing home (14)
1 2 lb 3 oz or less	30	19	3	—	—	—	—	—	—	—	—	—	10	3
2 Over 2 lb 3 oz up to and including 3lb 4oz	44	11	4	1	2	—	—	—	—	1	—	—	13	—
3 Over 3 lb 4 oz up to and including 4lb 6oz	103	8	8	1	4	—	—	—	—	—	—	—	14	—
4 Over 4 lb 6 oz up to and including 4lb 15oz	160	4	—	—	3	—	—	—	—	—	—	—	12	—
5 Over 4 lb 15 oz up to and including 5lb 8oz	250	2	5	—	9	—	—	—	—	—	—	—	2	—
6 Total ..	587	44	20	2	18	—	—	—	—	1	—	—	51	3

1 = 1,000g, or less, 2 = 1,001 – 1,500g, 3 = 1,501 – 2,000g, 4 = 2,001 – 2,250g, 5 = 2,251 – 2,500g.

Infant mortality (Figures for 1973 are provisional)

In 1972 and 1973, 52 per cent of births were males and 48 per cent females, but of the 151 deaths under one year in 1973, 58 per cent were males and only 42 per cent females, an excess of male mortality. Of these deaths 66 per cent (99), occured in the neonatal period, the great majority (91) being in the early neonatal period.

Of the neonatal causes of death, 79 per cent (48) of male and 66 per cent (25) of female neonatal deaths were classified to perinatal causes (International Classification of Diseases Codes 760–779) ; 13 per cent (8) of male neonatal deaths and 24 per cent (9) of female neonatal deaths were ascribed to congenital anomalies (Codes 740–759).

Of the 48 males and 25 female neonatal deaths ascribed to perinatal causes, 54 per cent (26) of the male deaths and 52 per cent (13) of the female deaths were classified to anoxia and hypoxia (Code 776) ; 23 per cent (11) of these male deaths and 36 per cent (9) of these female deaths were ascribed to unqualified immaturity (Code 777). In addition, 10 per cent (5) of male and 8 per cent (2) of female deaths were due to birth injury (Code 772). Thus these three causes accounted for 87 per cent of male and 96 per cent of female neonatal deaths.

In the post-neonatal category there were 52 deaths (26 male and 26 female) ; 38 per cent (20) of these deaths were due to infections of the respiratory tract, 31 per cent (16) due to the "Sudden Death in Infancy Syndrome" and 12 per cent (6) due to congenital anomalies.

The following table compares the mortality rates over the last six years.

Year	Mortality Rates					
	Stillbirths	Perinatal	Early Neonatal	Neonatal	Post-neonatal	Infant
	per 1,000 total births (live and still)		per 1,000 live births			
1968.. ..	15·9 (14·3)	29·9 (24·7)	14·3 (10·6)	16·1 (12·4)	10·3 (5·9)	26·4 (18·3)
1969.. ..	16·5 (13·2)	32·9 (23·4)	16·6 (10·3)	18·2 (12·0)	10·8 (6·0)	29·0 (18·0)
1970.. ..	15·4 (13·0)	30·0 (23·5)	14·9 (11·0)	16·7 (12·3)	6·7 (5·9)	23·4 (18·2)
1971.. ..	15·2 (12·0)	28·9 (22·0)	13·9 (10·0)	15·0 (11·6)	8·5 (5·9)	23·5 (17·5)
1972.. ..	13·4 (12·0)	27·1 (21·7)	13·9 (9·8)	15·3 (11·5)	7·0 (5·7)	22·3 (17·2)
1973.. ..	12·7	25·9	13·4	14·5	7·6	22·2

Rates in parenthesis apply to England and Wales (the rates for 1973 are not available)

The relatively large fluctuation in this table in the Manchester rates compared with the National rates is because the latter are an average of a very large number of births etc., compared to Manchester's number of 10,000 births or less.

The rates relating to infant mortality, still-births and perinatal mortality were the lowest ever recorded in Manchester.

Analysis of Stillbirths

(Figures compiled in the department)

Cause	Totals	Males	Females	Legitimate	Illegitimate	Place of confinement		Stillbirth certified by		
						Hospital or nursing home	Domiciliary	Doctor	Midwife	Uncertified
Maternal conditions:—										
Diseases in mother	—	—	—	—	—	—	—	—	—	—
Disease of pregnancy:—										
Toxaemia	2	2	—	1	1	2	—	2	—	—
Difficult labour	—	—	—	—	—	—	—	—	—	—
Other complications of pregnancy:—										
Premature rupture of membrane	1	—	1	1	—	1	—	1	—	—
Placental conditions	29	21	8	25	4	28	1	29	—	—
Cord conditions	12	7	5	9	3	12	—	12	—	—
Birth injury	1	—	1	—	1	1	—	1	—	—
Foetal conditions:—										
Congenital anomalies:—										
Anencephalus	11	3	8	10	1	11	—	11	—	—
Hydrocephalus	2	2	—	2	—	2	—	2	—	—
Spina bifida	1	—	1	1	—	1	—	1	—	—
Multiple	1	1	—	1	—	1	—	1	—	—
Other conditions:—										
Haemolytic	2	1	1	2	—	2	—	2	—	—
Macerated	7	3	4	7	—	6	1	6	1	—
Anoxic	14	6	8	9	5	12	2	14	—	—
Unspecified	5	3	2	5	—	4	1	5	—	—
All causes	88	49	39	73	15	83	5	87	1	—

Stillbirths, perinatal deaths, neonatal deaths, post-neonatal deaths and infant death rate, 1953–1973

Year	Total live and stillbirths	Stillbirths		Perinatal Deaths		Neonatal Deaths		Post-neonatal Deaths		Deaths under 1 year and stillbirths		Infant death rate per 1,000 live births
		Number of stillbirths	Rate per 1,000 live and stillbirths	Number of perinatal deaths (stillbirths and deaths under 1 week)	Rate per 1,000 total live and stillbirths	Number of neonatal deaths. 0–4 weeks	Rate per 1,000 total live births	Number of post-neonatal deaths. 4 weeks–1 year	Rate per 1,000 total live births	Number of deaths under 1 year and stillbirths	Rate per 1,000 total live and stillbirths	
1953	12,573	355	28·24	583	46·37	255	20·87	118	9·66	728	57·90	30·53
1954	12,232	389	31·80	587	47·99	237	20·01	112	9·46	738	60·33	29·47
1955	12,022	318	26·45	496	41·26	215	18·37	117	10·00	650	54·07	28·37
1956	12,291	324	26·36	538	43·77	241	20·14	117	9·78	682	55·49	29·92
1957	12,755	331	25·95	555	43·51	261	21·01	113	9·09	705	55·27	30·10
1958	12,657	322	25·44	533	42·11	237	19·21	79	6·41	638	50·41	25·62
1959	12,638	306	24·21	498	39·40	223	18·08	102	8·27	631	49·93	26·35
1960	12,922	327	25·30	530	41·01	237	18·82	129	10·24	693	53·63	29·06
1961	13,294	291	21·89	531	39·94	268	20·61	120	9·23	679	51·08	29·84
1962	13,873	302	21·77	530	38·20	263	19·38	150	11·05	715	51·54	30·43
1963	13,599	288	21·18	508	37·35	247	18·56	144	10·82	679	49·93	29·37
1964	13,555	272	20·07	479	35·34	244	18·37	138	10·39	654	48·25	28·76
1965	12,775	258	20·20	448	35·07	213	17·02	124	9·91	595	46·58	26·92
1966	12,208	223	18·27	383	31·37	198	16·52	108	9·01	529	43·33	25·53
1967	11,531	226	19·60	375	32·52	162	14·33	96	8·49	484	41·97	22·82
1968	10,909	173	15·86	326	29·88	173	16·11	110	10·25	456	41·80	26·36
1969	10,165	168	16·53	334	32·86	182	18·21	108	10·80	458	45·06	29·01
1970	9,566	147	15·37	287	30·00	157	16·67	63	6·69	367	38·37	23·36
1971	9,068	138	15·22	262	28·89	134	15·01	76	8·51	348	38·38	23·52
1972	7,833	105	13·40	212	27·06	118	15·27	54	6·99	277	35·36	22·26
1973*	6,906	88	12·74	179	25·92	99	14·52	52	7·63	239	34·61	22·15

*Provisional figures compiled in the department

Legitimate and illegitimate live births and deaths of infants under one year of age—Manchester and England and Wales

(Registrar General's returns 1953–1973)

	LIVE BIRTHS					DEATHS UNDER ONE YEAR OF AGE								
Year	Legitimate	Illegitimate	Totals	Illegitimate percentage of total live births	Illegitimate percentage of total live births England & Wales	Number			Rate per 1,000 related live births					
						Legitimate	Illegitimate	Totals	Legitimate	Illegitimate	Totals	England and Wales		
												Legitimate	Illegitimate	Totals
1953	11,450	768	12,218	6·29	4·75	352	21	373	30·74	27·34	30·53	26·5	33·0	26·8
1954	10,967	876	11,843	7·40	4·70	322	27	349	29·36	30·82	29·47	25·1	32·1	25·4
1955	10,879	825	11,704	7·05	4·66	312	20	332	28·68	24·24	28·37	24·5	31·7	24·9
1956	11,052	915	11,967	7·65	4·80	327	31	358	29·59	33·88	29·92	23·4	28·5	23·7
1957	11,407	1,017	12,424	8·19	4·80	337	37	374	29·54	36·38	30·10	23·0	30·0	23·1
1958	11,291	1,044	12,335	8·46	4·88	284	32	316	25·15	30·65	25·62	22·3	27·8	22·6
1959	11,186	1,146	12,332	9·29	5·09	298	27	325	26·64	23·56	26·35	21·9	27·4	22·0
1960	11,412	1,183	12,595	9·39	5·44	338	28	366	29·62	23·67	29·06	21·5	26·4	21·7
1961	11,675	1,328	13,003	10·21	5·90	355	33	388	30·41	24·85	29·84	21·1	25·3	21·4
1962	11,974	1,597	13,571	11·77	6·60	355	58	413	29·65	36·32	30·43	21·3	27·3	21·7
1963	11,634	1,677	13,311	12·60	6·90	344	47	391	29·57	28·02	29·37	20·8	26·0	21·1
1964	11,507	1,776	13,283	13·37	7·24	330	52	382	28·68	29·28	28·76	19·4	26·3	19·9
1965	10,741	1,776	12,517	14·19	7·66	280	57	337	26·07	32·09	26·92	18·5	24·9	19·0
1966	10,205	1,780	11,985	14·85	7·89	251	55	306	24·60	30·90	25·53	18·5	24·6	19·0
1967	9,442	1,863	11,305	16·48	8·40	210	48	258	22·24	25·76	22·82	17·9	23·7	18·3
1968	8,866	1,870	10,736	17·42	8·52	239	44	283	26·96	23·53	26·36	17·8	23·4	18·0
1969	8,203	1,794	9,997	17·95	8·41	218	72	290	26·58	40·13	29·01	17·4	25·4	18·1
1970	7,696	1.723	9,419	18·29	8·25	166	54	220	21·57	31·34	23·36	17·5	25·9	18·2
1971	7,228	1,702	8,930	19·06	8·38	168	42	210	23·24	24·68	23·52	16·9	24·1	17·5
1972	6,178	1,550	7,728	20·06	8·62	133	39	172	21·53	25·16	22·26	16·9	21·1	17·2
1973*	5,429	1,389	6,818	20·37	0·00	111	40	151	20·45	28·80	22·15	00·0	00·0	00·0

*Provisional figures compiled in the department

Causes of death in infancy and childhood

(Figures compiled in the department)

Cause of Death	Under 1 year					1 to 5 years					Total under 5 years
	Under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 1 year	Totals	1–	2–	3–	4–	Totals	
Enteritis and other diarrhoeal diseases ..	1	1	—	1	3	1	—	—	—	1	4
Meningococcal infection	—	—	—	—	—	—	2	—	—	2	2
Other infective and parasitic diseases ..	1	—	—	—	1	—	—	—	—	—	1
Malignant neoplasms	—	—	—	—	—	—	—	—	—	—	—
Endocrine etc., diseases	—	—	—	—	—	—	—	—	—	—	—
Other diseases of blood	1	—	—	—	1	—	—	—	—	—	1
Meningitis	1	—	—	—	1	—	—	—	—	—	1
Other diseases of nervous system	—	2	1	—	3	1	2	—	—	3	6
Circulatory diseases	1	2	—	—	3	2	1	—	—	3	6
Pneumonia	2	3	5	2	12	1	1	—	—	2	14
Other diseases of respiratory system	—	7	1	2	10	—	2	—	—	2	12
Intestinal obstruction and hernia	1	—	—	—	1	—	—	—	—	—	1
Other diseases of digestive system	—	1	—	—	1	—	1	—	—	1	2
Musculoskeletal diseases	—	—	—	—	—	—	—	—	—	—	—
Congenital anomalies	17	3	3	—	23	1	1	—	1	3	26
Birth injury	7	—	—	—	7	—	—	—	—	—	7
Difficult labour	1	—	—	—	1	—	—	—	—	—	1
Anoxia	39	—	—	—	39	—	—	—	—	—	39
Maternal conditions unrelated to pregnancy	1	—	—	—	1	—	—	—	—	—	1
Toxaemia of pregnancy	—	—	—	—	—	—	—	—	—	—	—
Other complications of pregnancy	1	—	—	—	1	—	—	—	—	—	1
Condition of placenta	2	—	—	—	2	—	—	—	—	—	2
Termination of pregnancy	—	—	—	—	—	—	—	—	—	—	—
Haemolytic disease	1	—	—	—	1	—	—	—	—	—	1
Condition of foetus	1	—	—	—	1	—	—	—	—	—	1
Immaturity unqualified	20	—	—	—	20	—	—	—	—	—	20
Suffocation in bed or cradle	—	—	—	—	—	—	—	—	—	—	—
Accident motor vehicle	—	—	—	—	—	1	1	—	1	3	3
Other violence	1	—	—	2	3	1	2	2	1	6	9
Ill defined	—	7	6	3	16	—	—	—	—	—	16
Totals	99	26	16	10	151	8	13	2	3	26	177

There were no deaths from syphilis, measles, scarlet fever, poliomyelitis, diphtheria or whooping cough

Deaths under one year of age from major causes 1953–1973

(Figures compiled in the department)

Year	Immaturity unqualified		Injury at birth		Congenital anomalies		Other diseases of early infancy		Diarrhoeal diseases		Respiratory diseases		Total	Infant mortality rate per 1,000 live births
	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	deaths	
1953..	85	7·0	44	3·6	53	4·3	70	5·7	9	0·7	70	5·7	373	30·5
1954..	52	4·4	44	3·7	81	6·8	90	7·6	11	0·9	49	4·1	349	29·5
1955..	62	5·3	31	2·6	72	6·2	71	6·1	6	0·5	54	4·6	332	28·4
1956..	70	5·9	29	2·4	66	5·5	92	7·7	5	0·4	54	4·5	358	29·9
1957..	86	6·9	44	3·5	64	5·2	83	6·7	2	0·2	56	4·5	374	30·1
1958..	80	6·5	40	3·2	48	3·9	82	6·6	5	0·4	39	3·2	316	25·6
1959..	63	5·1	33	2·7	53	4·3	85	6·9	3	0·2	37	3·0	325	26·4
1960..	79	6·3	28	2·2	75	6·0	82	6·5	15	1·2	43	3·4	366	29·1
1961..	91	7·0	44	3·4	79	6·1	81	6·2	12	0·9	57	4·4	386	29·7
1962..	74	5·5	48	3·5	63	4·6	75	5·5	32	2·4	72	5·3	415	30·6
1963..	79	5·9	50	3·8	55	4·1	79	5·9	11	0·8	78	5·9	390	29·3
1964..	58	4·4	36	2·7	79	5·9	89	6·7	16	1·2	61	4·6	382	28·8
1965..	54	4·3	43	3·4	56	4·5	83	6·6	8	0·6	64	5·1	336	26·8
1966..	47	3·9	25	2·1	51	4·3	77	6·4	10	0·8	68	5·7	306	25·5
1967..	49	4·3	20	1·8	42	3·7	55	4·9	14	1·2	58	5·1	258	22·8
1968..	48	4·5	20	1·9	44	4·1	61	5·7	11	1·0	70	6·5	282	26·4
1969..	49	4·9	17	1·7	43	4·3	66	6·6	23	2·3	68	6·8	290	29·0
1970..	35	3·7	12	1·3	39	4·1	64	6·8	7	0·7	39	4·1	220	23·4
1971..	29	3·2	10	1·1	39	4·4	57	6·4	4	0·4	45	5·0	210	23·5
1972..	22	2·8	16	2·1	34	4·4	50	6·5	4	0·5	26	3·4	172	22·3
1973..	20	2·9	7	1·0	23	3·4	46	6·7	3	0·4	22	3·2	151	22·2

Health Centres

Brunswick health centre

This centre was the first in the City's health centres capital development programme and provided comprehensive local health authority and school health services including dental facilities.

A number of family health services staff was based at the centre including a senior medical officer, an area nursing office, a fieldwork instructor, health visitors and school nurses, district nurses, premature baby sisters, chiropodists and bath attendants.

The health centre provided a considerable focus of general practitioner and local authority medical services within one building working so far as was possible as an integrated unit.

Beswick health centre

This centre was the second in the City's health centres capital development programme and commenced operation in 1972. The building, located in the Beswick comprehensive redevelopment area, was designed to fit into the neighbourhood centre. Other community services were provided nearby.

Local authority services provided from the centre included infant health clinics, antenatal and relaxation clinics, toddlers' clinics, screening test of hearing sessions, family planning and cytodiagnosis sessions, family guidance, chiropody services including a chiropodial laboratory, school health services including minor ailment clinics, immunisation, vision testing, speech therapy and dental services.

The Health Department staff appreciated not only the improved facilities which were available for the local authority services but, even more important, the opportunities which working with general practitioners in ideal conditions offered to improve the co-ordination of the local health and the general practitioner services to the consequent benefit of patients.

Care of Mothers and Young Children

Adoptions

Medical officers of the Health Department undertook to determine the medical suitability of children to be placed for adoption and of prospective adoptive parents. This involved a detailed examination of the children, usually at six weeks of age, but at other times as required, also medical reports of the child's parents and subsequent recommendations to the Director of Social Services as to the medical suitability for adoption.

Medical reports of prospective adoptive parents were also considered and recommendations made.

During the year, 81 children were considered for adoption, 34 of these were adopted, 18 were withdrawn by their parents, two were found to be medically unsuitable for placement, and one child died.

At the end of the year, a further 17 children were waiting for completion of their examinations and recommendations.

Battered babies

Two years ago, a ''Child Abuse Policy Committee'' was formed in Manchester to consider all aspects of non-accidental injuries to young children which was widely known as the ''battered baby syndrome''. This Committee was formed from representatives of the Medical Officer of Health, the Director of Social Services, Paediatricians, the N.S.P.C.C., Probation Service and certain other interested voluntary bodies, additional members being co-opted as relevant. Regular meetings took place throughout the year.

In January this year, the work with ''battered babies'' was greatly enhanced by the opening of a special unit of the N.S.P.C.C. in the City, partly financed by Social Services, the unit being staffed by a team leader and two social workers, all widely experienced officers of the N.S.P.C.C.

Children under four years of age suspected of non-accidental injury were referred to the unit from various sources such as general practitioners, paediatricians, hospital and local authority doctors, health visitors, social workers, etc.

Following referral, the team leader of the unit collected together all relevant reports and called a case conference of interested parties where discussions and decisions regarding the future care and ''follow-up'' of the child took place. A senior medical officer and health visitor of the Health Department was involved in each of these conferences. Whenever possible, the child was admitted to hospital initially or seen as an out-patient before a case conference was called so that a full medical examination, including a skeleton survey, could be carried out. The survey aimed to understand, help and support parents in their difficulties and, in this way, prevent further injuries.

Special Unit (Manchester)
Manchester Battered Child Registry

Summary of notified cases occuring within the City of Manchester in 1973

Type of injury				Ages (Months)	Type of injury			
Prodromal	Moderate	Serious	Females		Males	Serious	Moderate	Prodromal
1	1	2	4	0– 6	5	–	4	1
–	2	–	2	6–12	3	1	1	1
1	–	1	2	13–18	3	–	3	–
1	2	–	3	19–24	6*	2	3	1
1	2	–	3	25–30	–	–	–	–
–	1	–	1	31–36	4	1	3	–
–	2	2	4	37–42	1	–	1	–
–	3	–	3	43–48	1	–	1	–
4	13	5	22		23	4	16	3

* Fatal . . . 1 male (24 months)

16 children had no previous record of injury.
22 children had a history of repeated injury.
7 children were notified because it was thought they were ''at risk'' of being injured and 2 of these children were subsequently injured.
33 children received hospital treatment.
3 children were treated by maternal and child health doctors.

	1	2	3	4	5	6	7
Ordinal position in the family	22	7	9	3	1	1	2

18 were only children

Primary agency helping family

N.S.P.C.C.	22
Social Services Department	16
Health Visitor	3
Probation Officer	2
Medical Social Worker	1
Others	1

Dental treatment and dental services for expectant and nursing mothers and pre-school children

When the National Health Service Act, 1946, came into force in July 1948, it became the duty of the Health Committee to provide facilities for dental inspection and treatment for expectant and nursing mothers and children of pre-school age.

Prior to the National Health Act, a local authority was not statutorily required to provide dental treatment for maternity and child health patients. There was, however, a local arrangement on a limited scale for the inspection and extraction of teeth for the relief of pain and the removal of sepsis of dental origin provided by the attendance on one day a week of a part-time dental surgeon at each of two maternity and child health centres.

In conformity with recommendations by the Ministry of Health, the Education Committee, who had started their scheme for dental treatment of school children in 1915 and had, by 1948, 12 dental clinics and a central dental laboratory in use throughout the City, agreed to a joint dental scheme for patients eligible for treatment by local authorities under the Education Act, 1944, and the National Health Service Act, 1946. The Senior School Dental Officer was made responsible for the organisation and future planning of the joint services starting in 1948.

However, due to the difficult post-war condition of recruiting dental surgeons, it was not possible to comply with all the demands of the new Education and Health Service Acts and provide sufficient dental manpower to meet the demands of dental treatment of the so-called ''priority classes.'' In addition, the dental equipment in the school clinic dental surgeries was not suitable for the treatment of mothers. It was not until 1955, with the re-equipment of all the dental surgeries, that a slight improvement in the number of dental surgeons and the addition of a further dental technician for the dental laboratory, that it was possible to provide a fully integrated comprehensive service.

In 1959, the service also became responsible for the treatment of mentally handicapped children and in 1965, with the advent of improved anaesthetic drugs, techniques and personnel, it then became possible to further extend the service and provide a fully comprehensive treatment for all children irrespective of the extent of their handicaps.

The year 1964 saw the introduction of dental auxiliaries. These girls are specifically trained to undertake routine conservative treatment for children under the direction of a dental surgeon. To date, several of these girls have been and are working for the authority and making an excellent contribution to the efficiency of the service.

The joint development of the integrated service since 1948 has seen a great many changes. Improvements in accommodation, dental equipment and staff enabled a far more comprehensive treatment service to be provided. By this year, 12 new purpose-built health centres and combined clinics contained 23 well equipped dental surgeries, one having a very fine dental laboratory equipped for six technicians. Seven of these clinics were new, the remaining five being replacements of obsolete premises. A further seven new health centre/combined clinics were planned, three new and four replacement clinics, and by the end of the present decade there should be sufficient surgery accommodation to satisfy all demands on the service. Of special interest are two of these health centres, each having a specially designed dental department, which will work in conjunction with the Manchester Dental School in the clinical training of final year dental students and it is hoped that this scheme will go some way to improve the dental staffing manpower shortage.

In 1971, the City Council accepted the need, as a public health measure, to regulate the fluoride content of the water supply to one part per million. In the long term, this measure should modify the present service from one whose emphasis is almost entirely treatment to a combined preventive and treatment service, reducing the demand on the scarce dental manpower situation.

The Committee can feel satisfaction in that it is handing over to the new Area Health Authority an efficient, well-equipped, fully comprehensive dental service with forward planning to the end of the decade which will cover existing deficiencies in accommodation, the only limitation for the fulfilment of a City-wide comprehensive dental service being dental manpower over which the authority has no control.

Treatment

The service occupied the equivalent time of approximately one dental officer. Comprehensive treatment was available at 18 clinics for all cases referred by medical officers, general practitioners or mothers seeking treatment for themselves or their children. Varley Street Combined Clinic was completed during the year. A dental caravan was moved to a maternal and child health centre which had no dental provision and this should be ready for use early 1974. The following table shows the work done during the year:—

	Treated	Treatment completed	Attendances	Fillings	Extractions	General Anaesthetics	Dentures
Mothers	202	148	613	426	308	37	92
Pre-school children	482	368	856	429	519	160	—

Dental care of people in aged people's homes

Due to the uneven distribution of general dental practitioners in the City, a number of matrons of aged people's homes were unable to obtain dental treatment for their residents and appealed to the department for assistance. Although it did not come under the remit of the department, on humanitarian grounds treatment was provided for a small number of old people; for relief of pain, removal of sepsis and, where considered beneficial, the provision of dentures.

Dental services for expectant and nursing mothers and children under 5 years

Part A Attendances and treatment

Number of visits for treatment during 1973	Children 0–4 (incl.)	Expectant and nursing mothers
First visit	482	202
Subsequent visits	374	411
Total visits	856	613
Number of additional courses of treatment other than the first course commenced during year	34	4
Treatment provided during the year— number of fillings	513	426
Teeth filled	429	328
Teeth extracted	519	308
General anaesthetics given	160	37
Emergency visits by patients	33	22
Patients X-rayed	12	30
Patients treated by scaling and/or removal of stains from the teeth (prophylaxis)	115	84
Teeth otherwise conserved	150	—
Teeth root filled	—	—
Inlays	—	4
Crowns	—	3
Number of courses of treatment completed during the year	368	148

Part B Prosthetics

	Children 0–4 (incl.)	Expectant and nursing mothers
Patients supplied with full upper or full lower (first time)	—	27
Patients supplied with other dentures	—	38
Number of dentures supplied	—	92

Part C Anaesthetics

General anaesthetics administered by dental officers	—	71

Part D Inspections

	Children 0–4 (incl.)	Expectant and nursing mothers
Number of patients given first inspections during year	388	151
Number of patients in A and D above who required treatment	296	145
Number of patients in B and E above who were offered treatment	294	144
Number of patients re-inspected during year	34	4

Part E Sessions

Number of dental officer sessions (i.e. equivalent complete half days) devoted to maternal and child health patients

For treatment	350
For health education	10

"At Risk" register

Names of children who were "At Risk" of developing disabilities but did not show signs of a handicap were placed on this register.

They were selected according to specific criteria from information received on every child born to Manchester citizens. This information was supplied by maternity hospitals or the domiciliary midwifery service.

The conditions for placing a child on the "At Risk" register for perinatal hypoxia were felt to be too slight when the subsequent outcome of the cases was followed up. For this reason more stringent criteria were applied so that the medical supervision time might be more concentrated on those higher risk children.

A total of 482 infants were placed on the register for the following reasons:—

Deafness or blindness in parents or siblings	5
Severe physical or mental handicap in parents or siblings	3
Family contact with rubella in pregnancy ..	3
Low birth weight—1,800 grammes or less ..	103
Severe perinatal hypoxia	233
Convulsions	10
Hyperbilirubinaemia	54
Prolonged poor sucking	2
Other	69

The total number of children on the register at the end of the year was 1926. During the year 900 children were removed from the register for the following reasons:—

Normal development confirmed	696
Died	18
Removed from the City	128
Handicap diagnosed	58

Handicap register

This is a register of all known Manchester children who have physical or mental handicaps.

Throughout the year special observation was kept on all children on this list by both the centre medical officers and the health visitors in whose areas the children resided. Frequent visits were made by the health visitors who reported and discussed their findings with the centre medical officers. Each child's progress was assessed against the background of its home and disabilities. Sometimes this required the medical officer to visit the family at home after obtaining the general practitioner's consent. It was the aim of everyone dealing with these children to help them to develop to their fullest potential.

The number of children on the handicapped register increased. A major reason for this was a more careful recording of children who might have otherwise been simply 'watched', e.g. slight squints, treatable conductive deafness.

The number of children listed on the register at 31st December was 1,269. Many of these children had more than one handicap.

During the year 642 names were placed on the 'Handicap' register for the following reasons. Sixty-one of these children had multiple defects.

Defect	Age of notification					Total No. of defects registered at 31st December 1973
	Under 6 months	6 months and under 1 year	1	2	3 and 4 years	
Defects of nervous system						
Mental retardation	5	3	3	8	8	58
Autism	—	—	1	2	2	6
Cerebral palsy	3	2	2	3	4	49
Epilepsy	1	2	2	5	7	33
Hydrocephalus	12	1	1	1	—	49
Spina bifida	17	—	2	1	—	45
Speech disorders	1	1	1	14	32	63
Other—delayed development	—	2	15	15	21	114
Diseases of the ear						
Partial hearing loss	1	3	10	11	22	85
Profound hearing loss ..	—	2	5	1	2	16
Other	1	—	—	1	1	3
Diseases of the eye						
Squint	2	1	20	25	53	163
Partial sight	—	—	1	2	—	12
Blind	—	1	—	1	1	4
Other	—	3	3	—	4	21
Defects of cardiovascular system						
Congenital heart disease ..	24	2	6	5	8	105
Other	2	—	—	1	—	6
Defects of respiratory system	10	1	9	8	21	79
Defects of alimentary system						
Hare lip	8	1	—	—	—	26
Cleft palate	10	1	1	1	2	31
Other	9	2	—	—	1	21
Nutritional and metabolic disorders						
Coeliac disease	1	3	1	—	2	24
Fibrocystic disease	2	3	1	2	—	12
Phenylketonuria	2	—	—	—	—	10
Other	4	2	2	4	3	33
Endocrine disorders						
Hypothyroidism	1	—	3	—	—	3
Diabetes	—	—	—	—	—	2
Other	1	—	—	—	1	6
Defects of urinogenital system	24	3	3	3	4	66
Diseases of the blood	2	—	1	—	2	10
Skeletal and muscular defects						
Talipes	35	1	—	—	5	83
Congenital dislocation of hip	14	1	1	1	3	37
Other	22	4	5	2	6	83
Skin diseases	2	1	—	1	—	16
Other disorders—mongolism	10	1	1	2	4	59
Totals	226	47	100	120	219	1,433

One hundred and thirty-nine children had multiple defects.

Number of children on "Handicap" register 31st December, 1972 . . 1,060

Number of children on "Handicap" register 31st December, 1973 . . 1,269

During 1973, 433 cases were removed from the register, the reasons being given below:—

Died	35
Recovered	50
Removed from the City	63
Transferred to schools (5 years of age)	285

Under Section 34 of the Education Act, 1944, children who, because of a disability, may require special education in the school were referred to the School Health Section between the ages of 2 and 5 years. This year 311 such children were referred.

Notification of congenital malformations apparent at birth

During 1973 the total number of malformations reported as present at birth was 126 of which 120 were in live births and six stillbirths. Notification of these congenital malformations was made to the Department of Health and Social Security and uniformity of terminology was ensured by using the Department's classification.

	0	1	2	3	4	5	6	7	8	9	Total
	Central nervous system	Eye, ear	Alimentary system	Heart and great vessels	Respiratory system	Urogenital system	Limbs	Other skeletal	Other systems	Other malformations	
Live births . .	24	2	26	2	1	18	63	5	7	7	155
Stillbirths . .	6	—	—	—	—	—	—	—	—	1	7
Total	30	2	26	2	1	18	63	5	7	8	162

The 162 malformations classified above were in respect of 126 children of whom 28 were born with more than one malformation.

Nurseries and Child-Minders Regulation Act, 1948

Health Services and Public Health Act, 1968—Section 60

Responsibility for registration of persons and premises under the Nurseries and Child-Minders Regulation Act, 1948, as amended, is vested in the Director of Social Services, but the Family Health Services are responsible for the surveillance of the health of persons applying to become child-minders, organisers of private day nurseries or playgroup leaders.

Medical questionnaires of the staffs of proposed private day nurseries, playgroups and child-minders were scrutinised by medical officers and the premises were visited regularly to ensure that the highest standard of care was maintained in which to mind children under five years of age.

A special public health inspector made 286 visits or revisits during the year investigating applications for registration, increase in maximum permitted numbers or complaints received. He made his reports which were assessed and medical recommendations were made to the Director of Social Services.

Maternal and child health centres

Work of the medical officers in the child health clinics

The clinical medical officers looked towards their future role in preventive and assessment fields of health whilst making full use of the opportunities presented to them to meet their colleagues in hospital and general practice. These opportunities were greater than ever before due to the numerous clinical meetings arranged at the post-graduate medical centres of the district hospitals in the City.

Five full-time medical officers undertook six sessions of clinical work in five hospitals, two being attached to Withington and one each to Manchester Royal Infirmary, Saint Mary's, Booth Hall and Royal Manchester Children's Hospitals.

The work undertaken by the medical staff varied considerably, each of the 15 permanent doctors having an interest in more than one of the services provided. These services included child health and developmental paediatrics, immunization, pre-symptomatic screening tests for children, cervical cytology, family planning and surveillance of day nurseries and playgroups.

Three of the doctors held senior posts in relation to handicapped children, family guidance and family planning.

Clinics

Weekly clinics were held in the maternal and child health centres as follows:—

Infants	66
Toddlers	26
Antenatal	22

Medical officers were inattendance at the above clinics, with the exception of eight infant sessions and 20 antenatal sessions which were taken by health visitors and midwives respectively. At antenatal clinics midwives, when necessary, continued the practice of taking blood specimens.

Physiotherapy

There was a decline in the number of children referred to the school health service for physiotherapy treatment, whilst no children were referred for artificial sunlight treatment.

Relaxation classes, each supervised by a midwife, continued to be held weekly at 14 selected centres throughout the City and at six other centres as required.

Domestic science classes

After making a general appraisal of the domestic science classes held in the City, including those held at Adult Education Centres, it was agreed that it was uneconomical to hold the classes on clinic premises. The service was therefore discontinued.

Attendances at clinics

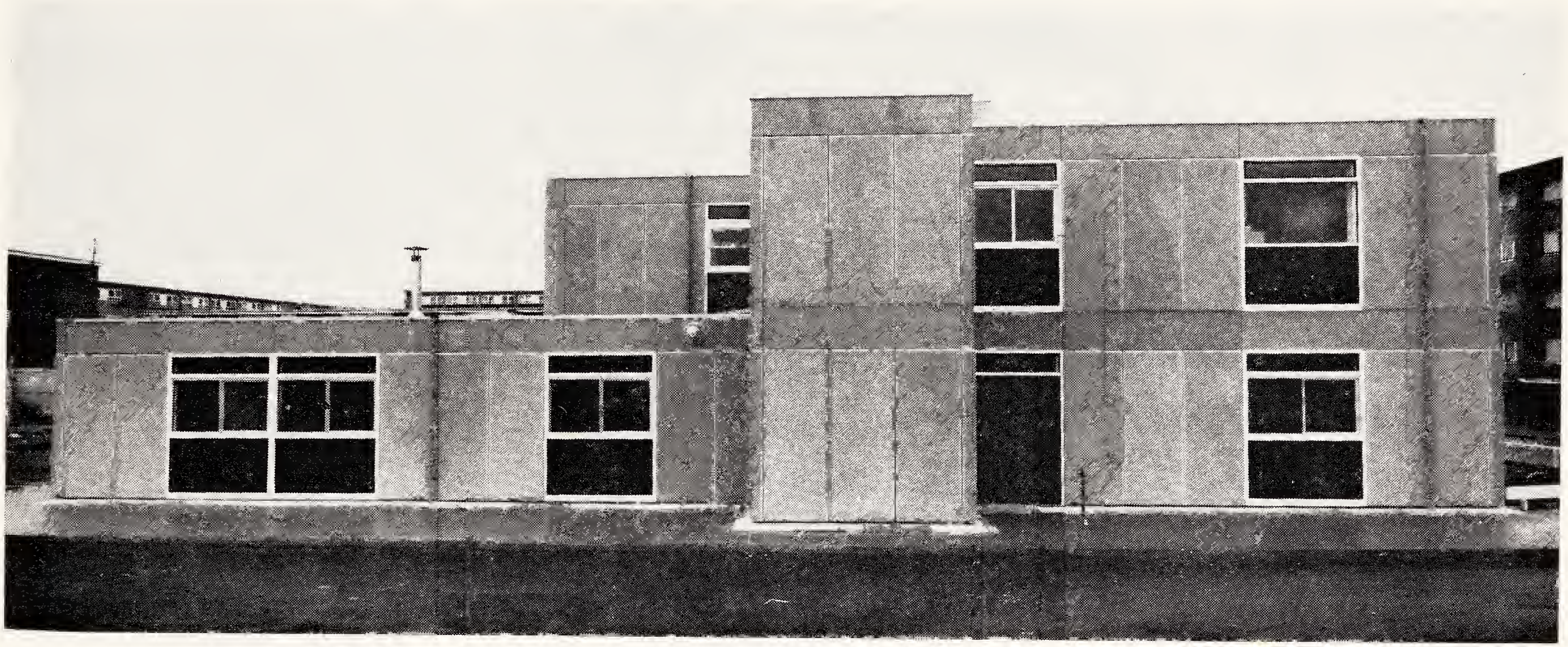
Attendances during 1973, with comparable figures for 1972, are given below:—

	1973	1972
Ante-natal sessions		
New cases	560	835
All cases	894	1,242
Attendances	3,484	5,663
Post-natal sessions		
Cases	27	—
Attendances	27	—
Relaxation and mothercraft classes		
Attendances	316	511

There was again a fall in the number of attendances at the ante-natal clinics, and a corresponding reduction in the numbers attending the relaxation and mothercraft classes. This was attributed to the lower number of births occurring in the City and a corresponding reduction in the number of home confinements, with the availability of more hospital beds.

An analysis of the attendances of the infant and toddler sessions is given in the following table.

Physiotherapy		**1973**		1972
Attendances		33		47
Artificial sunlight				
New cases (children)		—		2
All cases		—		2
All treatments		—		12
Infant and toddler sessions				
Under 1 year		30,403		32,453
1–2 years	25,317	31,076	23,568	37,672
2–3 years	3,409		7,789	
3–4 years	1,690		3,587	
4–5 years	660		2,728	
		61,479		70,125



Varley Street Combined Clinic—Exterior view

Varley Street Combined Clinic—Weighing Room

Centre	*No. of children who attended during the year and who were born in*				*No. of attendances during the year by children who were born in*			
	1973	1972	1968/71	Total	**1973**	1972	1968/71	Total
Abbey Hey	259	295	313	867	2,500	685	491	3,676
Ancoats†	75	103	221	399	266	333	367	966
Baguley	137	140	303	580	595	625	556	1,776
Beswick	218	229	280	727	789	867	509	2,165
Brunswick	125	180	235	540	417	632	365	1,414
Burnage	107	171	247	525	691	1,053	385	2,129
Charlestown	236	248	309	793	1,846	628	407	2,881
Cheetham‡	—	18	31	49	—	142	73	215
Chorlton-cum-Hardy	319	349	432	1,100	2,388	736	436	3,560
Clayton..	130	147	232	509	662	773	472	1,907
Collyhurst* (Varley St.)	147	203	205	555	735	597	459	1,791
Crumpsall	377	375	481	1,233	3,325	913	638	4,876
Darbishire House ..	179	177	170	526	1,023	306	199	1,528
Didsbury	198	206	566	970	1,016	1,192	1,035	3,243
Gorton	117	136	148	401	631	530	239	1,400
Harpurhey	146	187	193	526	840	802	905	2,547
Hulme	160	211	341	712	1,389	531	350	2,270
Levenshulme ..	410	409	666	1,485	1,673	1,631	1,247	4,551
Moss Side	225	293	352	870	1,661	605	406	2,672
Newton Heath ..	129	154	237	520	1,129	806	323	1,758
Northenden*	62	84	148	294	338	427	291	1,056
Northern Moor ..	147	159	291	597	768	715	493	1,976
Plant Hill	148	184	435	767	1,624	424	465	2,513
Unitarian Church ..	88	69	46	203	339	406	58	803
Wilbraham	135	182	232	549	664	802	422	1,888
Withington	297	288	218	803	2,212	483	246	2,941
Woodhouse Park ..	251	332	497	1,080	882	1,239	556	2,977
Total	**4,822**	**5,529**	**7,829**	**18,180**	**30,403**	**18,383**	**12,693**	**61,479**

†Closed November
‡Closed March
*Includes sub-centre

Minor ailments

Three hundred and thirty eight children under five years of age were referred by centre medical officers to the school health service for the treatment of minor ailments. Reasons for referral were as follows:—

Defective vision	63
Speech defect	117
Skin condition	73
Chiropody	5
Others	80

Welfare foods

Welfare foods were obtainable at specified times from all of the 29 maternal and child health centres in the City.

National welfare foods (as distinct from proprietary welfare foods) were obtainable by anyone who presented the appropriate coupon and/or who was prepared to pay the appropriate cost. Proprietary foods costing less than the manufacturer's recommended price were also available to all mothers who regularly attended the child health centres. Proprietary foods were issued to families with low incomes without charge if, in the opinion of the medical officer, a particular proprietary food was medically essential for a child.

In 1973, the cost to the Corporation of free issues of proprietary foods was £16, compared with £67 in 1972.

Issues of national welfare foods were as follows:—

Period	*National dried milk—tins/ packets*	*Cod liver oil —bottles*	*A, D & C vitiman tablets/ packets*	*Orange juice —bottles*	*Children's vitamin drops*
1968 ..	37,969	7,958	5,109	82,170	—
1969 ..	21,317	6,984	5,067	84,958	—
1970 ..	14,306	7,463	5,344	94,255	—
1971 ..	11,521	5,741	4,316	91,556	8,221
1972 ..	12,571	1,249	3,268	28,922	17,648
1973 ..	12,282	—	3,273	—	17,104

These figures exclude issues to hospitals, day nurseries and non-maintained schools.

Voluntary workers

Much appreciated voluntary assistance at maternal and child health centres was given by seven ladies who made 141 attendances.

Mothers' clubs

There is only one mothers club in the city at Northern Moor Child Health Centre. This has a membership which has increased during the year and shows an enthusiasm for health education which it is felt justifies its continuation. Other clubs in recent years have been closed as they proved uneconomic.

The programme of activities organised by the members themselves included lectures and discussions on such subjects as troubles from 2–5 years, prevention of accidents, recreation, immunization. One of the most successful was a talk on cytology by a health visitor of the department. This resulted in an increase in attendances for tests in the area which was very gratifying.

Rubella immunization

Rubella is known to produce certain congenital abnormalities in the children of mothers who develop or come into contact with rubella during the first three months of pregnancy and consequently immunization for senior school girls was established as a routine in 1970. There were, however, many girls over the age of 16 years who had not had the opportunity for immunization and it was therefore decided to offer this preventive service to certain young members of staff, i.e. in day nurseries, the Health Department and the United Manchester Hospitals.

Initially, a blood sample was taken and if found to have a deficiency of rubella anti-bodies, immunization was offered to the patient. 284 members of staff had blood tests and, of these, 235 were found to have anti-bodies and 49 (17·25%) required immunization. Cendavex rubella vaccination was used.

Since avoidance of pregnancy for one month before and two months after immunization is necessary, patients who might be "At Risk" of becoming pregnant were given contraceptive advice for this period.

Arrangements were made to extend this important preventive service to staff members of other departments and hospitals in 1974.

At the request of Saint Mary's Hospital consultants, arrangements were made to immunize newly-delivered mothers who had been found, during the ante-natal period, to lack anti-bodies.

Prevention of illness, care and after-care

Chiropody

In 1960 provision was made by the Health Committee under Section 28 of the National Health Service Act, 1946 for chiropody to be given to patients in certain priority groups. Initially the service was provided only through voluntary organisations but, since 1965 a direct chiropody service has been operated within the City. The growth of the chiropody service is well illustrated by the following statistics:—

	1960	1965	1973
Persons receiving treatment	1,120	4,318	12,852

The section had a staff at the end of 1965 of four full-time chiropodists and six private chiropodists who undertook clinic sessions and/or domiciliary visits. At the end of 1973 the staff consisted of 6 full-time chiropodists, including the Chief Chiropodist and 27 private chiropodists.

Regular chiropody clinic sessions were held at 23 premises in the City compared with seven in 1965.

The service had a setback during the year when four full-time staff resigned. Owing to the national and local shortage of chiropodists, it was not possible to recruit replacements.

Full-time members of the chiropody staff maintained their involvement in the treatment of school children. 4,948 treatments were given during the year.

The service was much appreciated by the elderly and physically handicapped whose mobility and comfort was increased by the treatment they received. The aim of the chiropody service was to keep the patient ambulant for as long as possible, so that they could enjoy a happy community life. Patients were encouraged to attend clinics and domiciliary treatment was only provided for patients who found it physically impossible to reach the clinic.

When the Collyhurst maternal and child health centre was transferred from Thornton Street to Varley Street combined clinic in November, the chiropody clinic was also transferred.

Three extra weekly sessions were commenced in March at Beswick Health Centre; one session was provided for the treatment of school children.

The one voluntary organisation providing chiropody treatment on an agency basis closed down in October and it was necessary for patients to be transferred to Health Department clinics.

The following statistics show the volume of work undertaken by the chiropody section:—

Patients on the register at 31st December, 1973

Receiving treatment	Elderly persons	Physically handicapped persons	Expectant mothers
At municipal clinics ..	7,893	153	4
At home	4,601	201	—
Total	12,494	354	4

Treatments given

Treatment received	Number of treatments (all classes)
At municipal clinics	19,601
At home..	12,848
Total	32,449

Close liaison has been maintained between family doctors, other sections of the Health Department, Social Services Department and the chiropody staff throughout the year.

Convalescence

Patients were granted recuperative holidays in the following homes:—

Dr. Garretts Memorial Home, Conway (Children aged 2–5 years)	32
Delton Hotel, South Shore, Blackpool (males)	6
Lear Home of Recovery, West Kirby (females)	14
"Binswood" British Red Cross Society Home, Didsbury (males and females)	28

Pre-school aged children were recommended in the main by the medical officers in the maternal and child health centres but some were recommended by general practitioners. The children were allocated a month's convalescence to combat general debility in some cases after operative treatment.

Adults were referred by their own doctors but many elderly people were recommended by health visitors or social service officers. During the year 224 adults were interviewed in their own home in an effort to decide the type of convalescence most suited to the individual. People recommended for the seaside had to be capable of travelling alone via the public transport system and be independent of either medical or nursing care. Elderly housebound patients were offered a stay at ''Binswood'' providing they were mentally alert and continent and capable of devoting care and attention to themselves. Transport was provided for the elderly and all adult convalescence was for a period of two weeks.

Some applicants who failed to qualify for convalescence through the Health Department were referred to the Social Services Department who were able to assist them as handicapped persons.

Pre-diagnostic screening tests

Metabolic disease of the newborn

During the year, 6,754 blood samples were taken from newborn babies for the Scriver's test for metabolic diseases. This screening test was undertaken on the 10th day of life, usually by the domiciliary midwives but occasionally when a child remained in hospital or required a test at a later date, the hospital midwives or health visitor carried out the test. No positive results were detected.

Congenital dislocation of the hip

During the year the names of fifteen children with this condition were placed on the ''handicap'' register.

Screening for abnormal haemoglobin

For several years, every baby born in the City has had a blood sample taken for a ''Scrivers'' test to detect metabolic diseases. This test utilises the serum in the sample only, the blood cells being discarded. Examination of these discarded cells was undertaken at the Royal Manchester Children's Hospital by Dr. D. I. K. Evans, Haemotologist.

From March to December the object was to detect abnormal haemoglobins in the newborn, especially sickle cell anaemia. When a suspicious blood was found, it was necessary to examine a full blood sample of a child, its parents and siblings. It was agreed that this blood sampling of families should be undertaken by a senior medical officer of the Family Health Services, the work being considered to be of a screening nature. By the end of the year, Dr. Evans had not published the results of his survey. It was not possible, therefore, to make comments in this report but details of cases followed up by the Health Department were as follows:—

Number of families visited	41	
Number of refusals	2	
Number of infant samples	39	157
Number of parents' and siblings' samples	118	
Infants with normal haemoglobin	9	
Infants with abnormal haemoglobin	30	

All these abnormal haemoglobins were harmless in themselves.

Screening tests of hearing

All health visitors are trained in the techniques of screening tests of hearing and in addition certain school nurses were trained to assist them in this task.

In past years babies or toddlers had to fail two tests at the Local Authority clinic before referral to Shawbrook School or the Department of Audiology at the University. This year all children failing the initial test were referred. This was one measure undertaken to increase the number of children tested and achieve an earlier diagnosis.

The total number of children tested during the year at 24 clinics and centres showed a slight increase over 1973 but it is regretted that many parents failed to accept the invitation to attend for this important diagnostic test.

Summary of screening tests undertaken

Clinic	No. of sessions	No. of children tested	No. of children passed	No. of children referred to University or Shawbrook
Abbey Hey	50	290	264	19
Ancoats (Varley Street)	29	88	70	12
Baguley	33	126	123	3
Beswick	24	176	174	2
Brunswick	52	180	160	20
Burnage	15	126	120	3
Charlestown Road	46	313	304	9
Chorlton-cum-Hardy	48	310	279	31
Clayton	20	118	108	6
Collyhurst	18	99	94	5
Crumpsall	89	501	441	60
Darbishire House	31	149	133	6
Gorton	20	92	90	2
Harpurhey	21	151	139	12
Hulme	40	149	135	4
Levenshulme	40	339	303	18
Moss Side and Wilbraham	34	187	175	7
Newton Heath	34	147	143	4
Northenden	22	151	139	12
Northern Moor	19	167	161	3
Plant Hill	36	152	148	4
Surrey Lodge	12	71	66	3
Woodhouse Park	53	408	390	18
Withington	30	262	249	13
Totals	816	4,752	4,408	276

Cytology

Close co-operation was maintained throughout the year with the Local Co-ordinating Committee on Cervical Cytology, one of the few in existence and which was based at Christie Hospital where regular opportunities were presented for exchange of views between senior members of the Health Department, consultants, general practitioners and representatives of voluntary organisations. New ideas for encouraging women to have cervical smears were discussed and later put into practice.

The service continued to be carried out in health centres, clinics, family planning clinics and industrial premises. Towards the end of the year, recall letters were being received by patients who had had smears previously. Arrangements were, therefore, put in hand to re-test these women.

The consultants at Christie Hospital had noted that some patients who presented with carcinoma of the cervix had a history of being in-patients of other hospitals for other complaints during the previous year or two and it was thought that early signs of cervical pathology might have been detected earlier had a test been made in the first hospital. With this in mind, the Health Department discussed ''Cytology for in-patients'' with the staff of United Manchester Hospitals and it was arranged that a medical officer of the Health Department should visit two wards, one medical and one surgical, each week from August to take smears of suitable in-patients. Administration, difficulties had to be overcome. There were shortages of hospital nurses and on the surgical ward, it was difficult to find an opportune moment for the test.

At the end of the year, under 100 smears had been taken and these were mainly on the medical ward. It was, therefore, decided to change the arrangements and to visit the medical ward only but to look into the possibility of extending the service to other wards such as the patients' investigation unit.

During the year 11,100 cytological examinations were effected and of these 4,639 were carried out on women who had not previously been tested.

A total of 23 positive smears was reported none being found in women being tested for the first time. In addition infection was found in 1,023 cases and pelvic examinations revealed 1,949 other abnormalities.

1. Local Authority Clinics
(a) Distribution of cytodiagnostic results by age group 1973

	Under 20 years	20/29 years	30/39 years	40/49 years	50/59 years	60 years and over	No age given	Total
New Smears	569	1,737	725	369	180	63	—	3,643
Repeat Smears	145	1,753	1,596	1,230	773	219	—	5,716
Negative Smears	714	3,458	2,303	1,583	952	281	—	9,291
Positive Smears	—	10	7	3	1	—	—	21
Suspicious Smears	—	22	11	13	—	1	—	47
Total	714	3,490	2,321	1,599	953	282	—	9,359

(b) Cervical Smears obtained from 1964 to 1973 at Local Health Authority clinics

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Negative Smears	2,364	3,081	3,754	4,065	5,402	5,379	6,835	7,940	8,756	9,291
Positive Smears	16	34	29	38	41	34	20	19	18	21
Suspicious Smears	17	35	60	141	118	67	36	44	51	47
Total	2,397	3,150	3,843	4,244	5,561	5,480	6,891	8,003	8,825	9,359

Cervical smear tests continued to be carried out at regular sessions at maternal and child health centres throughout the City and were also included at the departments family planning clinics. A total of 9,359 tests were carried out and of these 3,643 were initial tests. Positive smears were reported in 21 cases representing an overall incidence of 2·24 per thousand of all tests taken in the clinic. Patients whose test proved positive were immediately referred to their general medical practitioner for necessary treatment. Repeat smears were taken in 5,716 instances representing 61·00 per cent of all tests effected during the year at local health authority clinics.

2. Tests taken at industrial premises

(a) Distribution of cytodiagnostic results by age groups 1973

	Under 20 years	20/29 years	30/39 years	40/49 years	50/59 years	60 years and over	No age given	Total
New Smears	162	362	122	217	112	20	1	996
Repeat Smears	4	138	135	229	221	18	—	745
Negative Smears	166	497	254	444	332	38	1	1,732
Positive Smears	—	1	1	—	—	—	—	2
Suspicious Smears	—	2	2	2	1	—	—	7
Total ..	166	500	257	446	333	38	1	1,741

(b) Cervical smears obtained from industrial premises 1968–1973

	1968	1969	1970	1971	1972	1973
Negative Smears ..	5,826	3,668	1,994	2,014	2,037	1,732
Positive Smears	28	17	6	1	2	2
Suspicious Smears ..	19	25	5	10	12	7
Total	5,873	3,710	2,005	2,025	2,051	1,741

The practice of offering facilities to firms within the City so that their employees could be tested at their place of employment was continued and a total of 14 firms were visited and 1,741 women were tested 996 being tested for the first time. Only two positive smears were reported representing an overall incidence rate of 1·49 per thousand the rate being considerably less than that of clinic patients.

3. Distribution of total number of cytodiagnotic results by age group 1973

	Under 20 years	20/29 years	30/39 years	40/49 years	50/59 years	60 years and over	No age given	Total
New Smears	731	2,099	847	586	292	83	1	4,639
Repeat Smears	149	1,891	1,731	1,459	994	237	—	6,461
Negative Smears	880	3,955	2,557	2,027	1,284	319	1	11,023
Positive Smears	—	11	8	3	1	—	—	23
Suspicious Smears	—	24	13	15	1	1	—	54
Total	880	3,990	2,578	2,045	1,286	320	1	11,100

4. Other abnormalities found in 1973

	Industrial	Clinics	Total
Trichomonas	69	621	690
Monilia	53	280	333
Erosion	315	1,002	1,317
Polyps	19	125	144
Cervicitis	45	194	239
Inflammatory changes.. ..	6	98	104
Fibroids	—	8	8
Prolapse	—	5	5
Other e.g. cysts, etc.	1	131	132
Total	508	2,464	2,972

Haemodialysis in the home

Adaptations of homes to install artificial kidney machines.

Since 1968, when local authorities were authorised to carry out conversions or adaptations to domestic premises for the purpose of installing artificial kidney machines for the treatment of chronic kidney failure, 11 homes have been adapted for haemodialysis.

Following requests from the Medical Director of the Artificial Kidney Unit at Withington Hospital, arrangements were made for the haemodialysis organiser from the hospital and a representative from the Health Department to meet patients and their relatives in their own homes to discuss the necessary adaptation requirements.

Adaptation of a room in the home, usually an existing bedroom, was carried out by the Direct Works Department within an approved limit of £300 per home. The room chosen for the installation of the kidney machine must be large enough for a single bed and the dialysis equipment and necessary supplies. There may be need for additional electrical wiring to meet the demand of the dialyser machine which needs a 30 amp. supply. Provision of a direct supply of hot and cold water to a sink capable of completely immersing the artificial kidney is essential. The walls and ceiling of the room should be washable and the floor must be water-resistant to contain any water leaks. Adequate drainage of waste material is essential and additional plumbing may be necessary. Shelving is required for the storage of one month's supply of sterile dressings and containers of concentrated fluids.

Good liaison between the representatives of the Health and Direct Works Departments and the haemodialysis administrator at the Artificial Kidney Unit ensured speedy and trouble-free conversions.

The expensive dialysis machines and equipment were provided and maintained by the South Manchester Hospital Management Committee, who were responsible for the extra electricity consumed and the installation and rental of a bedside telephone to enable the patient to easily summon help. Considerable work was entailed by the staff at the Kidney Unit with regard to the maintenance and frequent distribution of supplies to service each patient's machine.

Home dialysis freed the hospital from the routine work of dialysis but considerable hospital training of both the patient and the relatives was involved before transfer of home dialysis. Treatment at home was supervised by the Kidney Unit staff until the patient and relatives were fully acquainted with the procedure.

Home dialysis not only saved on hospital beds but also saved the patient's travelling time and the period of separation from other members of the family. Patients received treatment in the relaxed atmosphere of the home environment and they led a reasonably full family life. The risk of cross-infection in supervised home dialysis was minimal compared with dialysis in hospital. The cost of domiciliary haemodialysis to the community as a whole was far less than that of hospital treatment.

At the end of the year, nine patients were receiving kidney treatment in their own homes. One further application had been received and the home was in the process of adaptation ready for home dialysis in early 1974.

One patient died during the year.

Laundry service

Two hundred and nine chronic sick persons nursed at home were supplied with laundered bed linen/night attire, deliveries and collections of soiled articles being made twice weekly.

The laundering of soiled articles was carried out in a most satisfactory manner at Springfield Hospital.

There was a slight decrease in the number of patients being supplied with disposable absorbent paper sheets which continued to be available as an alternative to linen draw-sheets, particularly to patients who are doubly incontinent, 2,109 patients being supplied as compared with 2,183 in 1972.

The Department is aware of difficulties which may be encountered when disposing of soiled pads. Burning in domestic fires continued to be the main practice. Disposal was also effected by burning in incinerators or, providing they are well wrapped, by the normal refuse service. To this end, large incinerators or disposal units capable of dealing with soiled pads were incorporated into purpose-built health centres, combined clinics and maternal and child health centres in the City and were also provided at various existing maternal and child health centres.

The practice of supplying protective pants and interliners free of charge to necessitous disabled persons on either the recommendation of a general medical practitioner or district nurse, was continued and during the year, 370 persons availed themselves of this service compared with 312 during 1972.

Loan of sickroom equipment

Sickroom nursing requisites were obtainable on loan and free of charge from either a district nurse report centre or directly from the Health Department. Requests for such loans require substantiation by either a doctor, district nurse, health visitor or midwife. During the year, 2,348 persons applied for the loan of this type of nursing equipment compared with 2,042 during 1972.

Tuberculosis

Notifications

On 31st December, there were 1,831 persons on the Tuberculosis Notification Register and 79 Manchester Patients were receiving treatment in hospitals and sanatoria. New cases of respiratory tuberculosis notified decreased from 192 in 1972 to 175 in 1973. There were 120 male cases (136 in 1972) and 55 female cases (56 in 1972). In addition, the Medical Officer of Health was informed of 10 cases (11 in 1972) of respiratory tuberculosis from local registrars' death returns and three cases (three in 1972) by posthumous notification.

New cases of non-respiratory tuberculosis decreased from 35 in 1972 to 27 in 1973. There were 16 male cases (16 in 1972) and 11 female cases (19 in 1972). In addition, the department was informed of one case (two in 1972) of non-respiratory tuberculosis from local registrars' death returns, and no cases (one in 1972) by posthumous notification.

Of the 202 notifications of all forms of tuberculosis in 1973, 53 referred to Commonwealth immigrants and 6 to European and other immigrants. The notification rates:—1·16 per 1,000 population for the Commonwealth and other immigrants* and 0·30 per 1,000 population for the remaining residents of Manchester.

> **estimated population in Manchester* 51,000. *The population of persons of the various nationalities is not known.*

The nationality, age and sex distribution of the Commonwealth and other immigrant cases notified was:—

Age group years	Commonwealth												Non-Commonwealth			
	Caribbean		Indian		Pakistani		Asian		African		Other		European		Other	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0–4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5–15	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
16–40	1	2	4	6	14	8	1	0	2	1	0	0	0	1	3	0
41–60	1	0	0	0	4	2	0	0	1	0	0	0	1	0	1	0
over 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	2	4	6	21	12	1	0	3	1	0	0	1	1	4	0

Of the 27 new cases of non-respiratory tuberculosis notified in 1973, 18 were Commonwealth and other immigrants, whose country of origin was Pakistan (11), India (2), the Caribbean (2) and African (3).

The site of disease in these 18 cases notified was lymphatic system (9), vertebral column (1), abdomen (2), bones and joints (2) mediastinal glands (1) left axila (1), cervical adenitis (1) and hand (1). In the remaining 9 cases, the site of the disease was lymphatic system (3), genito-urinary tract (3), vertbral column (2) and buttock (1).

As in previous years, a small, but by no means unimportant, number of cases of tuberculosis were first notified after death. Of the 13 notifications of respiratory tuberculosis in this category, five were females and eight were of males. The females were aged 54 years, 59 years, 68 years, 75 years and 87 years respectively. The 8 males were distributed by age as follows: one 37 years, one 47 years, two 52 years, one 57 years, one 60 years and two 75 years. There was one case of non-respiratory tuberculosis notified after death; a male aged 88 years.

Deaths from respiratory tuberculosis numbered 29, one more than in 1972, consisting of 10 females and 19 males. One male and no females died from non-respiratory tuberculosis compared with two males and one female in 1972. Of the 29 deaths from respiratory tuberculosis, 24 were the result of active disease and five due to late effects of tuberculosis. The one death from non-respiratory tuberculosis was heart.

Primary notifications of and deaths from tuberculosis
Comparative figures for years 1970–1973

(*Rates per thousand of the population*)

Year	Primary notifications						General death rate Manchester	Death rate all respiratory diseases except tuberculosis (M/cr.)	Death rates, tuberculosis Manchester						Death rate, respiratory tuberculosis, England and Wales
	Respiratory			Non-respiratory					Respiratory			Non-respiratory			
	M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate			M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate	
1970	0·44	0·22	0·33	0·07	0·06	0·06	12·57	2·09	0·10	0·03	0·06	—	0·00	0·00	0·019
1971	0·51	0·24	0·37	0·06	0·07	0·07	13·15	1·94	0·09	0·02	0·06	0·01	—	0·00	0·019
1972	0·53	0·20	0·36	0·09	0·07	0·07	13·57	1·96	0·10	0·00	0·05	0·01	0·00	0·01	0·020
1973	0·47	0·20	0·33	0·06	0·04	0·05	13·52	2·08	0·07	0·04	0·06	0·00	0·00	0·00	0·000

Source of notification of tuberculosis

Source	*Respiratory*	*Non-respiratory*	*Totals*
Private practitioners	5	1	6
Manchester chest clinic	110	12	122
Baguley chest clinic	—	—	—
Other chest clinics	—	—	—
Manchester hospitals	54	12	66
Other hospitals	6	2	8
Totals	175	27	202

Tuberculosis (pulmonary and non-pulmonary)

Incidence and deaths in age groups for years 1921, 1941, 1961, 1967 - 1973

Year	0—				1—				5—				15—				45—				65—				Total				Totals	
	Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		All forms	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1921	10	4	16	20	39	16	91	61	203	25	226	64	924	604	173	89	376	283	31	17	46	35	8	1	1598	967	545	252	2143	1219
1941	3	—	3	2	14	5	46	35	36	6	68	18	610	366	124	42	266	241	13	11	39	61	4	7	968	679	258	115	1226	794
1961	—	—	—	—	15	—	2	—	27	—	3	—	178	2	27	2	139	31	4	3	23	17	3	—	382	51	39	5	421	56
1967	1	—	—	—	8	—	—	—	12	—	1	—	144	5	17	—	77	19	5	1	23	18	4	1	265	42	27	2	292	44
1968	2	—	—	—	18	—	2	—	22	—	5	—	130	4	25	3	63	17	5	3	26	15	1	1	261	36	38	7	299	43
1969	—	—	—	1	5	—	4	1	17	—	10	—	81	2	43	1	55	12	3	9	19	9	8	6	177	23	68	17	245	40
1970	1	—	—	—	8	—	1	1	16	—	2	—	88	4	28	—	58	10	6	—	23	21	1	—	194	35	38	1	232	36
1971	—	—	—	—	7	—	—	—	14	—	2	—	94	3	25	3	60	7	4	1	27	21	5	—	202	31	36	4	238	35
1972	—	—	—	—	8	—	1	—	10	—	1	—	92	2	22	1	57	4	10	1	25	22	1	1	192	28	35	3	227	31
1973	—	—	—	—	5	—	1	—	11	—	2	—	102	2	18	—	46	14	5	3	11	13	1	1	175	29	27	1	202	30

Summary of notifications of tuberculosis during the period 1st January to 31st December, 1973

	FORMAL NOTIFICATIONS													
	Number of primary notifications of tuberculosis (new cases) by age													
	0–1	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	Total (all ages)
Respiratory, males	—	—	4	2	4	10	14	15	25	24	16	4	2	120
Respiratory, females	—	1	—	3	2	13	8	9	8	2	4	2	3	55
Non-respiratory, males ..	—	—	—	—	2	—	5	4	3	2	—	—	—	16
Non-respiratory, females ..	—	1	—	—	—	—	1	3	2	3	—	1	—	11

The age and sex distribution of the tuberculosis deaths was:—

Age in years	Respiratory		Non-Respiratory	
	Male	Female	Male	Female
0–	0	0	0	0
15–	0	0	0	0
25–	0	0	0	0
35–	2	0	0	0
45–	6	1	0	0
55–	6	1	0	0
65–	3	3	0	0
75–	2	5	1	0

B.C.G. vaccinations

In 49 sessions, 874 pre-vaccination Heaf tests, 491 B.C.G. vaccinations, and 438 conversion Heaf tests were carried out. In addition to contacts of tuberculous cases, patients included newly arrived immigrant children, school children who had missed appointments at school, student nurses and other hospital staff.

Home helps

A home help can be of invaluable assistance in a tuberculous household. Staff who undertook this work were volunteers and arrangements for them to have chest X-ray examinations were made every two years. Their period of duty was limited to three months in active tuberculosis cases. Eighteen patients suffering from tuberculosis were given help during the year.

Department of Health and Social Security

Financial anxiety was frequently a burden to the family containing a patient suffering from tuberculosis and officers of the Department of Health and Social Security were understanding and sympathetic in providing financial assistance to those in need.

Food grants

Supplementary milk and food grants were made to tuberculous patients whose income fell below a scale laid down by the Health Committee. This scale is periodically revised and at the end of the year was as follows:—

One adult (single or widow)	£7·80
One parent and one child	£9·85
Two parents	£11·90
Two parents and one child	£13·95
Each additional child	£2·25

An allowance was made for rent where this exceeded 75p per week. Thirty-two grants were made during the year.

Housing

Twenty-nine applications for rehousing on medical grounds were referred by the Housing Survey Section of the Health Department. In every case a medical report was received from the consultant chest physician and a home conditions report was submitted by the health visiting staff to the Medical Officer of Health who subsequently recommended rehousing in twenty-one cases.

Colonisation

The Health Committee assumes financial responsibility for the maintenance of patients accepted by village settlements after a period of observation. On 31st December, 1973 there was one patient in the Barrowmoor Village Settlement.

Loans

A small legacy bequeathed to the Corporation for the purpose of helping tuberculous patients, made possible the gift of bedding and clothing to needy patients during the year. In order to safeguard the isolation of patients nursed at home, beds and bedding were loaned as necessary and any articles required for nursing care were loaned at the request of the domiciliary nurses.

Sputum boxes were distributed free of charge and premises, beds and bedding were disinfected without cost to the patient.

Mass radiography health survey

The following report has been supplied by Dr. J. Rimington, Medical Director of the Mass Radiography Service—Southern Division.

During the year the two Units of the Southern Division of the Regional Mobile Chest X-ray Service visited the following establishments within the City of Manchester.

Basement Clinic, Manchester Town Hall
John Dalton College
Didsbury College
Fieldon Park College
H.M. Prison

In addition, visits were also made to 25 establishments for the examination of tuberculosis contacts.

The results of the surveys are summarised in the following tables. Table I is based on a ten per cent sample of the record cards completed during the survey. The table is not strictly accurate in detail, but is sufficient to give a fairly correct indication of sex distribution of the various examinee groups attending the Unit. The other tables are strictly accurate, having been compiled from the individual record cards, but it should be noted that about 9 per cent of the abnormal cases were not fully diagnosed when this report was compiled and they have been included under the most likely classification.

A supplement gives details of the cases referred and abnormalities discovered during the special X-ray sessions at the Town Hall Extension Basement Clinic—these figures have been extracted from those of the main report.

The results are considered on the last page of this report under "Comments".

Table I—persons examined

	Males	Females	Total
General Practitioner referrals	1,958	1,541	3,499
Contacts, positive reactors	109	96	205
Other contacts	2,235	1,792	4,027
Contacts with children .. .. .. (statutory requirements)	1,741	4,491	6,232
Prisoners	556	—	556
Special industry	225	1	226
Factories/offices	97	15	112
General public	137	124	261
Miscellaneous	5	5	10
	7,063	8,065	15,128

Table II—diagnosis tuberculous cases

	Males	Females	Total
Tuberculosis—healed	13	5	18
Tuberculosis requiring occasional clinic supervision	16	17	33
Tuberculosis requiring treatment or close supervision	26	15	41
	(3·68)	(1·85)	(2·71)

Table III—types of examinee with tuberculosis requiring treatment or close supervision

	Males	Females	Total	
General practitioner referrals	14	10	24	(6·85)
Contacts	8	1	9	(2·23)
Prisoners	2	—	2	(3·59)
Contacts with children .. .. .. (statutory requirements)	2	4	6	(0·96)
	26	15	41	

The figures shown in brackets show the discovery rate per thousand persons examined found with tuberculosis requiring treatment or close supervision.

Table IV—non-tuberculous cases

	Males	Females	Total
Malignant neoplasms	27	7	34
Non-malignant neoplasms	2	6	8
Lymphadenopathies	4	3	7
Sarcoids	1	2	3
Congenital cardiac and vascular abnormalities	1	1	2
Acquired cardiac and vascular abnormalities	41	56	97
Pneumoconiosis with P.M.F. ..	2	—	2
Congenital abnormalities of bony thorax and soft tissues	—	1	1
Acquired abnormalities of bony thorax and soft tissues	5	8	13
Congenital malformation of lungs ..	1	—	1
Bacterial and virus infections	35	19	54
Bronchiectasis	11	6	17
Emphysema	9	—	9
Fibrosis	35	13	48
Spontaneous pneumothorax	2	1	3
Pleural effusion	1	—	1
Pleural thickening or calcification ..	12	7	19
Abnormalities of the diaphragm ..	4	4	8
Miscellaneous	12	7	19
	205	141	346
Failed to attend for further investigation	10	—	10

Comments

(1) Total examinations decreased to 15,128 during 1973 compared with 19,250 in 1972 because of a further reduction in routine public/industrial examinations.

(2) The number of cases of tuberculosis requiring treatment or close observation detected was 41 compared with 64 in 1972, and although the discovery rate (2·71 per thousand) was reduced from that of 1972 (3·32 per thousand) it was still well above that found nationally. Once again, the highest discovery rates were in contacts, general practitioners' referrals and institutional inmates.

(3) Thirty-four cases of malignant neoplasms were found—the discovery rate (2·2 per thousand) being similar to that of 1972. As usual, most of the cases were middle-aged or elderly male cigarette smokers.

(4) Numerous other significant abnormalities requiring investigation or treatment were found and referred, e.g. 97 acquired cardiovascular lesions.
All the abnormalities detailed in the tables were referred for investigation or treatment either to chest physicians, thoracic surgeons, cardiologists or general practitioners.

Supplement

The Manchester Regional Hospital Board's Regional Mobile Chest X-ray Service (Southern Division) has continued to hold regular chest X-ray sessions in the Basement Clinic of the Town Hall Extension.

Details of cases referred and abnormalities discovered are given below, but it should be noted that these have been extracted from the figures of the main report for the City of Manchester attached herewith, and these are not in addition to those figures.

Examinee group	*Number*
General practitioners referrals	3,499
Contacts, positive reactors	205
Other contacts of tuberculous cases	488
Special industry	226
Statutory examinations (persons in contact with children)	5,099
Public and industrial groups	261
Miscellaneous	10
All groups	9,788

Abnormalities discovered	*Number*
Tuberculosis requiring treatment or close supervision ..	31
Tuberculosis requiring occasional supervision	26
Tuberculosis healed	10
Neoplasms	33
Cardiac lesions	82
Other significant abnormalities	172
All abnormalities	354
Failed to attend for further investigation	2

The continuing success of these sessions is evidenced by the increase in the number of cases referred and examined which rose from 8,793 in 1972 to 9,788.

Family planning

Every year since 1967, when the National Health Service (Family Planning) Act came into force, the Health Department has added to the service in some way.

In the early years, additional clinics were opened and later the work was expanded to take place in hospital premises and the homes of the citizens of Manchester when required.

A fully comprehensive training course was added later and during this year training was extended to include general practitioners and a vasectomy service was planned. Details of various aspects of the family planning service available to all citizens of Manchester follows.

The service in clinics

By the end of the year, specially trained medical officers attended 27 sessions weekly in 22 clinics, including Saint Mary's Hospital. Each was supported by two midwives and one or two clerks. The smooth running of the clinics was attributed to the team spirit shown by all members of staff.

Work in the homes

This was the first full year of the domiciliary family planning scheme. There were continuing requests for the service from consultant gynaecologists and obstetricians, health visitors and general practitioners on behalf of difficult or problem patients, many of whom had been previously unable, for a variety of reasons, to take advantage of the facilities offered at the clinics but found themselves able to do so in the domiciliary service.

With regular visits from the medical officer, motivation was so well established that, in many cases, it was possible to transfer patients from the domiciliary to the clinic service.

Requests were also made for vasectomy. It became a main feature, when visiting, to find the husband staying at home at the time of the medical officer's visit to discuss possible solutions to their family planning problems. Of the 250 home visits made during the year, 147 were to new patients.

In one area of the City, a survey of patients who had failed to report to the clinic after the insertion of an intra-uterine device was carried out by one of the family planning medical officers. She visited each patient at home, offering further advice where necessary. One hundred and forty-one patients in the survey were visited. Of these 90 were offered further advice. The remaining 51 were recorded as having left the area and no further attempts were made to contact them.

Vasectomy

Planning and organisation of a vasectomy service, permitted under the National Health Service (Family Planning) Amendment Act, 1972, was undertaken during the year. Negotiations with consultants of the maternity hospitals in the City took place and eventually it was agreed that the premises already used by the Health Department for family planning would be made available in Saint Mary's Hospital for the purpose of vasectomy. The local health authority would bear the cost of the staff and equipment.

Arrangements were also made to use Beswick Health Centre as a second clinic for the operation.

Pre-operative counselling of patients and their wives by two senior medical officers commenced in December and the first operations were planned to take place in January, 1974. The service was restricted to suitable patients who resided within the City boundaries and no charge was to be made to the patient.

Training

(*a*) *A full training programme*

It was announced early in the year that family planning would become a greater responsibility of general practitioners in the reorganised National Health Service and that their training and consequent registration by a newly-formed Joint Committee on Contraception of the R.C.O.G. and R.C.G.P. was advisable. This Committee set criteria for the theoretical and practical sections of the training course. In all respects these conditions were similar to those set for the courses of training which had been organised by the Health Department twice yearly for several years. Recognition of the Health Department's course by the Joint Committee was, therefore, obtained. The Committee also set standards for ''instructing'' medical officers and clinic premises. These the Health Department also complied with.

Recognition of the course under Section 63 was obtained from the Dean of Post-Graduate Medical Studies in Manchester for general practitioners. General practitioners were notified of the course on a regional basis and immediately 180 made application to attend. Arrangements were made to hold the theoretical section of the course at the newly-opened Post-Graduate Centre at Crumpsall Hospital where facilities were excellent.

(*b*) *A general course*

During the year, two one-day meetings were arranged for the Health and Social Services Departments staff to discuss general principles of family planning. Many members of the local authority staff who came into daily contact with members of the community attended. The course was aimed to make staff aware of the needs and provisons for family planning in the community. About 200 members of staff attended.

(*c*) *Medical students*

Arrangements were made for medical students undertaking their obstetric course at Saint Mary's Hospital to visit two family planning clinics, one in the hospital and one in a family planning clinic elsewhere, to observe the work and organisation of the service.

Analysis of New Cases
Table 1.

	Number of new patients seen during the year		
	Married (including the widowed, separated or divorced)	Unmarried	Total
Male	19	2	21
Female	3,516	1,158	4,674
Total	3,535	1,160	4,695

Table 2.

Number of new patients seen during the year who were:—	Medical cases	580
	Non-medical but needy	1,739
	Other non-medical cases	2,376
	Total	4,695

Table 3.

Number of new patients seen during the year who were initially advised to use:—	Sheath	456
	Pill	3,132
	Diaphragm	138
	I.U.D.	791
	Other methods	415
	No method advised	322

Details of patients and attendances by age-groups 1967–1972

Table 4

Year	Under 20 years		20/29 years		30/39 years		40 + years		Total No. of patients	Total No. of attendances
	No. of patients	No. of attendances	No. of patients	No. of attendances	No. of patients	No. of attendances	No. of patients	No. of attendances		
1967.. ..	37	72	454	1,112	229	536	37	97	757	1,817
1968.. ..	153	362	1,706	4,156	754	1,431	92	187	2,705	6,136
1969.. ..	341	936	2,399	6,552	880	2,117	122	326	3,742	9,931
1970.. ..	488	1,298	3,256	9,415	1,076	2,862	154	436	4,974	14,011
1971.. ..	643	1,812	4,371	11,831	1,442	3,690	245	616	6,701	17,949
1972.. ..	884	2,692	4,871	13,463	1,699	4,934	578	836	8,032	21,925
1973.. ..	1,751	3,296	7,823	16,841	2,728	5,402	496	963	12,798	26,502

Family Guidance Service

The figures for the first three-quarters of the year showed an increase in the number of new cases who attended the Family Guidance clinics and an increase in the number of interviews. This was accounted for, to a certain extent, by increasing the catchment area of Northenden clinic by the opening of clinics at Woodhouse Park and Northern Moor. The number of patients attending at the Northenden clinic had decreased because of transport difficulties caused by roadworks on Princess Parkway.

Health visitors and school nurses continued to be the main source of referrals to this service. This was to be expected as they were the people who came into closest contact with families. It was pleasing to note that general practitioners used the service more frequently. This was possible because health visitors attached to group practices drew the doctors' attention to this facility. Emotional problems were recognised earlier. The majority of cases were behavioural problems, especially children who were disturbed by stress at home, too frequently caused by marital disharmony. Many mothers, uphappy at home, found the strain of small children too much and broke down or resorted to excessively hitting a child unable to conform to her standard of expectation at a particular moment. If the husband in such a partnership would attend the Family Guidance Service, he could often be helped to see the need to support his wife but, unfortunately, it is very difficult to get such a husband to attend.

There were regular case conferences held at Darbishire House. Dr. Grant reported as follows on the year's work:—

"February saw the twenty-fifth anniversary of the formation, initially in a single and independent clinic in Ardwick, of the Family Welfare Service of the City of Manchester Health Department, a uniquely successful experiment in family psychiatry, now known, perhaps more appropriately, as the Family Guidance Service, a specialised unit concerned with those family problems in which emotional and psychiatric factors are predominant.

Closely associated from its beginning with the Child Welfare clinics the service became part of the Health Department in 1960, operating from clinics throughout the city and developing as a specialised therapeutic unit, linking the field of family psychiatry to a predominantly psychotherapeutic approach.

The part-time staff consisted of a consultant psychiatrist with special experience in psychotherapy, and two senior medical offices of the Health Department also with psychotherapeutic experience. A psychiatric social worker and two secretary/receptionists completed the present complement.

During the year some 300 new referrals came to the service, more than half through the Health Department and its staff, with a further quarter of the referrals coming direct from general medical practitioners and the remainder from other areas of the health and social services mainly. The presence of psychiatric illness was a causative factor in almost a third of the referrals and its treatment a major element in the therapy. Of the total problems investigated something approaching thirty per cent involved young children, and each year a significant and increasing proportion of young people within the adolescent age range are referred within the context of more general family problems.

Emotional disturbances and mental illness were rarely isolated and individual events. In the family setting lay some at least of the effects and causes. The value of "family psychiatry" was that an approach at this level could not only have preventative and ameliorating aspects but diagnoses could often be made at an early stage and treatment undertaken within, and often with the support of, the disturbed family which itself benefited therapeutically. Part of the process of recovery from illness always involved the family, its insight and adaptation, and it is within this their realistic life situation that our patients were helped to health. The family not so much as a position to which patients must return but as a situation rather in which they were continually involved, and where each available member of the family was treated as part of the therapeutic process.

Started as what was at the time described as an "experiment" and the first of its kind, the Family Guidance Service of the City of Manchester Health Department has over quarter of a century shown the need for, and the value of, its specialised approach in family psychiatry. To its staff our gratitude as always. To the Health Department our thanks for opportunity, support and encouragement."

Case load

	Beswick	Brunswick	Charlestown/ Collyhurst	Darbishire House	Didsbury	Northenden/ Northern Moor/ Woodhouse Park	Totals
Old cases	8	12	4	11	20	27	82
New cases	21	79	48	34	40	78	300
Total cases seen	29	91	52	45	60	105	382
Total number of interviews during the year	82	241	125	239	273	224	1,284

Sources of referral of cases:

Health visitors	137
General practitioners	90
Health department staff	45
Relatives	19
Own initiative	18
School health	16
Social workers	9
Child guidance	6
Family planning	6
School teachers	6
Others clients	4
Student health	4
Citizen's advice	3
Education welfare officers	3
Press	3
Probation officers	3
Marriage guidance	2
Police	2
Dental surgeon	1
Midwife	1
Nursery matron	1
Psychologist	1
Samaritans	1
Speech therapist	1
	382

Diagnosis of problem in all cases:

Marital disharmony—without apparent individual disorder		129
Individual disorder—predominantly psychiatric		116
personality disorder	49	
depression	32	
anxiety state	23	
sexual problems	8	
enuresis	4	
Family concern—advice sought		126
re children	111	
re other relations	15	
Extra-family problems – school, housing and financial		11
		382

Co-ordinating Committee for the care of children neglected or ill-treated in their own homes

A senior medical officer attended meetings regularly of Areas I and III of the City. Arrangements for co-ordinating the various health departments to help to relieve stress in these families, continued, e.g. convalescence, admission to day nurseries and supportive help through the Family Guidance Service.

Co-ordination of the Family Guidance and Child Guidance services

A senior medical office continued to link up these services and carry on to the school leaving period the special support which many children needed regarding their emotional problems at this time.

Liaison with Pendlebury Children's Hospital Psychiatric Unit

The senior medical officer was seconded for one session each week as honorary clinical assistant to the Psychiatric Department at Pendlebury Children's Hospital. This proved to be a very useful link between the Hospital and the Health Department for Manchester children who are patients in the Psychiatric Department.

Community Relations

The Community Relations Officer has continued to work very closely with the Manchester Council for Community Relations, towards the promotion of better community relations in the city.

There has, this year, been particular concern about the training of staffs of the Health and Social Services Departments in relation to services for minority groups and much progress has been made in this field.

The Community Relations Officer has dealt with some appropriate casework during the year, and has been involved in several projects, including a large Summer Playscheme in the Cheetham area financed by the Urban Programme.

Although the expulsion of non-citizen Asians happened last year, there have continued to be many difficulties encountered by refugees in their resettlement in the City. The most serious problems occur where the head of the household is still outside the U.K., and is unable to gain admission.

Incidence of blindness

(National Assistance Acts)

The following information has been kindly supplied by the Director of Social Services and the majority is in the form required by the Department of Health and Social Security.

Summary of register of blind persons for 1973

		Twelve months ended **31–12–1973**		Twelve months ended 31–12–1972
Number of cases on register		1,280		1,195
add				
Number of new cases		118		136
Removals into area		15		17
		1,413		1,348
deduct				
Number of deaths	117		51	
Removals out of area	24	141	17	68
		1,272		1,280

1973		1972	
Males	*Females*	*Males*	*Females*
511	761	514	766

There was a decrease of eight on the register of blind persons compared with 1972.

Age periods	
Under 2 years of age	—
2– 4 ,, ,,	4
5–15 ,, ,,	26
16–20 ,, ,,	7
21–39 ,, ,,	83
40–49 ,, ,,	52
50–59 ,, ,,	128
60–64 ,, ,,	94
65–74 ,, ,,	250
Over 75 ,, ,,	628
	1,272

Of those registered blind at 31st December there were:—

22 at school
4 under training
3 not training, but trainable
2 trained but unemployed
125 employed at Blind Institutes and elsewhere.

Classification of cases of blindness certified and registered in 1973

	Males	Females	Total
New cases from 1st January to 31st December, 1973	43	75	118
Number of deaths during 12 months	44	73	117

Ages at which blindness occurred	New cases			Present age periods		
	Males	Females	Total	Males	Females	Total
Under 2	4	—	4	—	—	—
2– 4	—	1	1	—	—	—
5–15	—	1	1	3	—	3
16–20	—	—	—	—	—	—
21–39	3	—	3	2	—	2
40–49	1	2	3	1	—	1
50–59	6	6	12	5	6	11
60–64	1	3	4	1	3	4
65–74	7	18	25	9	15	24
Over 75	20	42	62	22	51	73
Unknown	1	2	3	—	—	—
Totals	43	75	118	43	75	118

Causes of blindness

	Males	Females	Total
Cataract	7	16	23
Glaucoma	7	10	17
Diabetic retinitis	1	5	6
Macular degeneration	9	24	33
Myopia	—	2	2
Keratitis	—	—	—
Retinopathy	1	3	4
Choroiditis	—	—	—
Disciform degeneration	1	—	1
Thrombosis	—	—	—
Optic atrophy	3	3	6
Corneal ulcers	1	1	2
Uveitis	3	—	3
Aphakia	1	—	1
Detachment of retina	1	—	1
Other causes	8	11	19
	43	75	118

Summary of statistics of blind persons for the last ten years

Year ended 31st December	Total on register	New cases	Cases re-certified	Deaths	Cases de-certified	Transfers into area	Transfers out of area
1964	1,192	132	1	136	1	28	36
1965	1,189	144	1	137	—	17	28
1966	1,165	132	1	139	2	30	46
1967	1,162	125	1	101	2	21	47
1968	1,140	108	—	119	1	20	30
1969	1,134	92	—	99	—	21	20
1970	1,174	119	—	86	—	22	15
1971	1,195	96	—	68	—	22	29
1972	1,280	136	—	51	—	17	17
1973	1,272	118	—	117	—	15	24

Summary of register of partially-sighted persons for 1973

	Twelve months ended **31–12–1973**		Twelve months ended 31–12–1972	
Number of cases on register		775		717
add				
Number of new cases		123		113
Removals into area		5		4
		903		834
deduct				
Number of deaths	65		15	
Removals out of area	22		9	
Transfers to blind register	25		35	
De-certified	1	113	–	59
		790		775

	1973 *Males*	**1973** *Females*	1972 *Males*	1972 *Females*
New cases	309	481	44	69

The number of registered partially-sighted persons increased by 25 compared with 1972.

Age periods	
Under 4 years	—
5–15 ,,	30
16–20 ,,	21
21–39 ,,	85
40–49 ,,	32
50–59 ,,	57
60–64 ,,	46
65–74 ,,	156
Over 75 ,,	363
	790

Of these registered partially-sighted at 31st December, there were:—

33 at school
5 under training
13 unemployed but available for training
76 in employment

Scabies and lice infestation

Infestation amongst men of no fixed abode continued to cause concern to the local authority. In an effort to control the spread of infection treatment was offered on the premises to those attending hostels. This system, instituted in 1972, has resulted in a reduction in the incidence of infestation and scabies.

The number of adults disinfested for scabies and lice are as follows:—

	Scabies		Lice infestation	
	Males	Females	Males	Females
Total number of persons treated ..	12	23	320	19
Number of resident and treated in hostels	12	—	311	—
Number resident and treated in Social Services Homes	—	—	—	—
Number treated in own homes ..	—	—	7	6
Number treated in clinics	—	23	2	13

SCHOOL HEALTH SERVICES

The School Health Service

The introduction of compulsory school attendance brought to public attention the deplorable physical condition of a great number of children but it was not until public opinion was jolted by the rejection rate of volunteers for the army during the Boer War that the inadequacy of philanthropy was accepted.

Dr. Brown Ritchie, Manchester's first School Medical Officer, was appointed in 1902, one of the first of these appointments in the country. He organised a comprehensive survey which yielded incontrovertible evidence of the extent of malnutrition, visual defects, infectious diseases and backwardness and of the results of ignorance of health standards. Subsequently, his annual reports revealed the hitherto generally unknown extent of preventable disease and deplorable health standards.

The accumulation of evidence in Manchester and elsewhere led to the Education (Administrative Provisions) Act 1907 which imposed on local education authorities a duty to provide free medical inspection for children on admission to school and at such intervals subsequently as might be prescribed by the Board of Education. The next year, Manchester appointed five medical officers and five nurses and the School Health Service made great strides in the following years.

Nevertheless, until 1914, the School Health Service was mostly concerned with inspection, the supervision of the cleanliness of children and the follow-up of cases to ensure that treatment was, where possible, given. It did not provide treatment itself—the official policy was that hospitals, private practitioners, dispensaries and voluntary agencies should be fully utilised. The outbreak of war in 1914 led to an abrupt reversal of this policy. The diversion of doctors into war service led to the suspension of inspection but this was only approved on the understanding that every effort would be made to treat defects which were found.

The first school clinic was opened in the Education Offices in 1914, the second in 1915 in Stretford Road, Hulme, and a third in Ancoats in 1916 which, in the following year, was reported as too small to cope with an epidemic of conjunctivitis which affected a thousand children. Clinic attendances increased annually (from 21,766 in 1915 to over 200,000 in 1919) and subsequently certain specialised treatments were introduced, including operative treatment for tonsils and adenoids at the Stretford Road Clinic (1919), ionisation treatment for chronic ear disease (1923) and minor orthopaedic treatments for such conditions as deformities arising from rickets, scoliosis, or flat feet (1923). It was quickly appreciated that the clinics made an important contribution to the general standard of health and that this in turn promoted more regular attendance at school.

The demands of the war effort attenuated the School Health Service between 1914 and 1919 but it had fully recovered by 1920 and was being extended. Children in nursery schools were examined as well as three age-groups in elementary schools and the corresponding age groups in secondary, day-continuation and junior technical schools.

Much of the senior school medical officers' time was spent on the examination of children with special difficulties at the supervision clinic in the Education Offices. These children included those referred for places in special schools and others referred for ringworm and persistent uncleanliness. From the start of the school health service, the staff concentrated on raising the standards of personal cleanliness. Full use was made of the powers conferred by the Children's Act 1908, and for many years about 20 children a week were compulsorily cleansed at the cleansing station provided by the Public Health Authority. Progress was made; in 1914 24 per cent of the children examined were issued with cleansing notices but by 1929, this number had been reduced to 2·9 per cent. The present rate is 0·11 per cent. Diseases of the skin, especially ringworm of the scalp and impetigo, gave particular cause for concern. In the twenties, an average of 2,000 cases of ringworm were under supervision yearly compared with a current figure of less than 18.

With the increase in the number of school medical examinations, the number of minor ailment clinics continued to grow. The clinics established in Gorton (1920), Cheetham Hill (1925) and Newton Heath (1928) were the first purpose-built clinics in the country. The range of treatments was extended and in 1928, ultra-violet ray therapy was introduced. In 1934, the practice of operative treatment for tonsils ceased at the Stretford Road clinic and all operations were arranged at Booth Hall hospital.

The school nurses provided an after-care service for the children and arrangements were also made for the supervision by school medical officers of children previously in hospital because of rheumatic heart disease, chorea and nephritis.

By 1929, great progress had been made. The incidence of rickets and tuberculosis was declining as were eye and skin diseases, and the standard of personal hygiene was much higher and rising. The emphasis had been transferred from recording to treatment and was moving to preventive measures as the service gathered more strength and became increasingly able to think in terms of promoting health rather than defending against disease and illness. The incidence of gross physical defects continued to decline until 1939. New techniques of treatment continued to appear—for example, orthoptic treatment for squint and audiometric screening by using a gramophone in 1936. Additional clinics were established and there are now 22 minor ailment clinics.

Routine medical inspections were again disrupted in 1939 but by 1943 had been fully re-established. One of the major problems of the war years was the treatment of scabies. The five pre-war years showed an average of 903 cases, but the figure rose to 1,581 in 1940, 3,500 in 1942 and to a peak of 4,426 in 1943 after which it declined to 182 in 1950.

A significant advance during the war was the appointment of the first speech therapist in 1943. The commonest defect treated initially was stammering but the service has been substantially expanded and about 1,510 children are now treated annually.

The issue of the School Health Regulations in 1945 in accordance with the provisions of the 1944 Act represented a major step forward in the role of the service. The School Health Service is as concerned with the individual child's physique and emotional and social needs as the education service and the relationship is one of reciprocal partnership. Its contribution has been expanded, diversified and refined and its development will continue as part of the Child Health Service.

The Child Guidance and School Psychological Service was a relative late comer to the complex of resources which the education service has developed to meet the special needs of some children and in Manchester the service was begun by voluntary initiative led by Professor F. E. Tylecote. The first clinic began in premises loaned by the Workers Educational Association in 1932; it moved in 1935 to the top floor of Atherton Street School and, in 1937, the Education Committee took over responsibility for the clinic and incorporated it in the School Health Service. The clinic closed in 1939 but was re-opened later in the war and finally, after several moves, was housed at 54 High Street, now Hathersage Road.

Although it over-simplifies the development, it is helpful to distinguish two major influences in the emergence of the service. The "child guidance" element was largely British in its early development and the emphasis is on the objective, scientific, and observational study of children. This tradition is stamped with the contributions of Darwin ("Biographical Sketch of an Infant", published in 1877), Galton (who was the first to attempt systematically to relate objective, observational study to a planned programme of guidance and remediation), Sully, McDougall, Spearman and Burt.

The second element was largely developed in the United States by psychiatrists such as Meyer and then Healy and had a considerable medical emphasis. They began with the treatment of adult delinquency, backwardness and mental illness and this brought them to a study of childhood years as the formative period. Healy opened his Juvenile Psychopathic Clinic in Chicago in 1909 and as other clinics followed, a pattern of organisation crystallised consisting of the psychiatric social worker broadly responsible for contact with the home, the psychologist who administered the tests of intelligence, aptitudes and attainments, and the psychiatrist responsible for the diagnosis, any therapy required and the direction of the clinic.

These traditions are brought together in the Child Guidance and School Psychological Service and in 1937, when Manchester's first clinic became the responsibility of the Education Committee, the staff consisted of two part-time psychologists, one full-time psychiatric social worker and Dr. W. M. Burbury who was the psychiatrist and medical director. It was modelled on the American pattern and concentrated primarily on the diagnosis and treatment of emotional and behaviour disorders by psychiatric methods. Referrals came mainly from medical sources and only 10 per cent from the schools (compared with 39·6 per cent today).

The service expanded and, in 1952, the Committee reviewed its development. Deputations visited other large cities and their reports were studied, the Glasgow service making a particularly strong impression. The Committee decided to re-structure the service in Manchester and to expand it—in general, along lines which incorporated what they considered to be the best features of the Glasgow service. In 1953, they appointed a Senior Educational Psychologist, with two assistants, and a brief to develop the service.

A major phase of development now began. The annual referral rate to the Hathersage Road Clinic in 1953 was 200 but it was obvious that the need was much greater and plans were accordingly made to establish additional clinics. The Wythenshawe Centre was established in 1960, Gorton in 1964 and Harpurhey in 1965.

In 1968, referrals passed the 1,000 mark. As well as the increase in the number of children dealt with by the service, there has of course been continuous development of the methods—assessment, for example, is increasingly sophisticated and the range of treatment procedures is much wider than it was.

Other developments of very great value have concerned special groups of children—slow-learners and under-achievers and non-attenders. A pilot study in 1954 led to the development, by 1961, of a comprehensive screening procedure for the early detection of children who might be in need of places in special schools for slow-learning children. This procedure is being progressively refined and its further development is promising. A beginning was also made in 1954 with the provision of remedial teaching centres of which there are now seven with a teaching staff of 18. The main function is to resolve the difficulties of the ''under-achiever'', promote performance to the level of the child's ability and reinstate him in school. An important development took place in 1969, when three of the Centres in areas of particular need were chosen for the provision of in-service courses on reading methods for teachers of junior age children.

This is no more than an indication of the scope of the Child Guidance and School Psychological Service. It meets a great variety of special and individual needs which can only be crudely and unsatisfactorily classified and any review of its work can only be selective. The service is making a very valuable contribution to the special needs of some children and there is every reason to believe that its further development could make a very powerful contribution to the education service as a whole.

In October 1970, whilst the medical and dental work of the school health service transferred to the health department, the responsibility for the child guidance service and schools psychological service was retained by the education department.

However, close liaison exists between the health and education departments, with a senior medical officer working in co-operation with the Principal Educational Psychologist. The psychiatrists and social workers, who are on the staff of the health department, are attached for duty as required by the education service.

From 1970 to the present date the uncertainty of the future of the School Health Service made recruitment of full-time staff difficult. In spite of this work and progress continued e.g. during 1970 and 1971 vaccination against German measles was offered to 13,093 school girls in the 12—13½ years age group and 65 per cent of parents agreed to their daughters being protected. 8,083 girls were vaccinated in the first two years

The increasing use of grommets in exudative otitis media resulted in an 80 per cent improvement in this condition.

Miscellaneous medical examinations of teachers and students continued to be carried out. Staff suffering from disability or prolonged ill-health were medcially examined and, where indicated, a recommendation for retirement was made on medical grounds.

From the foregoing account it is clear that the aims of the pioneers of the school health service have been achieved. The horizon has widened with developments in medicine and educational research. The service will not stand still.

General statistics

School population January 1973—maintained schools	101,346
Number of maintained nursery, primary and secondary schools..	300
Number of children on registers	98,432
Number of maintained special schools	31
Number of children on registers	2,914
Number of children attending direct grant, non-maintained and independent schools..	3,104

School Clinics

Medical services were provided at 19 school clinics. Ancoats Clinic, which opened in 1916, was transferred to the Varley Street Combined Clinic, Miles Platting in November. A daily clinic was held by a school nurse at Wright Robinson School and it is planned to hold similar clinics at other comprehensive schools.

The number of children attending certain clinics decreased due to the City's slum clearance and redevelopment programme and some clinics were held on a part-time basis.

The treatment of minor ailments, skin conditions, eye and ear infections was carried out by clinic nurses. School doctors attended at regular sessions for consultations and examinations.

The Medical Officer of Health and headteachers notified this department of the arrival of new immigrants and arrangements were made for their examination at the local school clinics. Children were also examined to determine their fitness for employment according to local bye-laws.

At selected clinics throughout the City provision was made for speech therapy, physiotherapy, chiropody, ultra violet ray treatment and treatment for enuresis.

The E.N.T. consultant held clinics at the Central clinic, where the audiometry clinic is sited. The Ophthalmic Consultant also held clinics in addition to the refractive clinics held by ophthalmic medical officers in several district clinics.

Consultant orthopaedic surgeons held out-patient clinics at the Lancasterian and Telford schools for physically handicapped pupils.

Dental treatment was provided at 18 school clinics.

The attendances at all clinics were as follows:—

School Clinics	184,115
Dental Clinics	65,964

The main types of medical services provided at each clinic were as follows:

Average number of half-day sessions held at school clinics in each week during the year

School Clinic	Examination of physically handicapped pupils	Examination of educationally sub-normal pupils	Examination of epileptic pupils	Examination of delicate pupils	Examination of children requiring convalescent treatment	Examination of school children for employment	Examination of staff, teachers and students	Examination for defective vision	Treatment of miscellaneous minor ailments	Treatment of ear, nose and throat diseases	Treatment of minor orthopaedic defects	Ultra-violet ray treatment	Chiropody	Immunization and vaccination
Ancoats	—	—	—	—	—	1	—	1	10	10	—	—	—	1
Baguley	—	—	—	—	—	1	—	—	5	5	—	—	1	1
Beswick	—	—	—	—	—	1	—	—	5	5	—	—	—	1
Brunswick	—	—	—	—	—	1	—	1	5	5	—	—	—	—
Central	3	4	1	1	1	—	3	1	—	4	—	—	—	—
Charlestown	—	—	—	—	—	1	—	1	5	5	—	—	1	1
Cheetham	—	—	—	—	—	1	—	1	5	5	—	—	1	1
Collyhurst	—	—	—	—	—	1	—	—	5	5	—	—	—	1
Gorton	—	—	—	—	—	1	—	2	10	10	1	5	1	1
Hulme	—	—	—	—	—	1	—	1	10	10	—	—	1	1
Levenshulme	—	—	—	—	—	1	—	—	5	5	1	—	—	1
Moston	—	—	—	—	—	1	—	1	5	5	—	—	1	1
Newton Heath	—	—	—	—	—	1	—	1	10	10	—	—	1	1
Northenden	—	—	—	—	—	1	—	—	5	5	—	—	—	1
Northern Moor	—	—	—	—	—	1	—	—	5	5	—	1	—	1
Openshaw	—	—	—	—	—	1	—	1	5	5	—	—	—	1
Plant Hill	—	—	—	—	—	1	—	1	5	5	—	—	1	1
Withington	—	—	—	—	—	1	—	1	5	5	1	—	—	1
Woodhouse Park	—	—	—	—	—	1	—	—	5	5	—	—	2	1

Special clinics and services

Audiometer	4 sessions	Orthoptic	10 sessions
Enuresis	7 sessions	Oto-laryngological	3 sessions
Haemoglobin estimation	1 session	Speech therapy	62 sessions

School clinics

Medical and dental clinics

*Ancoats	Closed 23rd November.
*Baguley	Hall Lane, Baguley, Manchester, M23 8NA Tel: 998 4408
*Beswick Health Centre	Ranworth Close, Beswick, Manchester, M11 3SL Tel: 223 6551
*Brunswick Health Centre	Hartfield Close, Brunswick Street, Manchester, M13 9TP Tel: 273 4901
Central	Byrom Street, Deansgate, Manchester, M3 4PF Tel: 228 2191, Ext. 7443 or 236 3377
*Charlestown	Charlestown Road, Blackley, Manchester, M9 2DD Tel: 740 7955
Cheetham	Smedley Street, Cheetham Hill Road, Manchester, M8 8UN Tel: 205 1622
*Collyhurst Sub-Clinic	2 Overcombe Walk, Manchester, M10 7TH Tel: 205 6407
Gorton	Gorton Road, Manchester, M12 5BQ Tel: 223 1489
*Hulme Combined Clinic	217 Hulme Walk, Manchester, M15 5FQ Tel: 226 5211
Levenshulme	963 Stockport Road, Manchester, M19 3NP Tel: 224 1663
Moston	16 Moston Lane, Manchester, M9 1AA Tel: 205 1007
Newton Heath	Pilling Street, Oldham Road, Newton Heath, Manchester, M10 6AW Tel: 205 2646
*Northenden	Bazley Road, Northenden, Manchester, M22 4FL Tel: 998 2652
*Northern Moor	Moorcroft Road, Northern Moor, Manchester, M23 0AF Tel: 998 5522
Openshaw	1460 Ashton Old Road, Manchester, M11 1HL Tel: 370 1429
*Plant Hill	Plant Hill Road, Blackley, Manchester, M9 3LX Tel: 740 7909
*Varley Street	Miles Platting, Manchester, 10 Tel: 205 6111/4 (opened 26th November)
Withington	535 Wilmslow Road, Manchester, M20 9BA Tel: 445 1555 and 434 3011
*Woodhouse Park	Simonsway, Manchester, M22 5JZ Tel: 437 4625

Dental Clinics

*Abbey Hey	Constable Street, Manchester, M18 8GD Tel: 223 7420

*Didsbury	Wilmslow Road, Didsbury, Manchester, M20 8RN Tel: 445 6743
Orthodontic	Brunswick Centre, Hartfield Close, Manchester, M13 9TP
Mobile dental clinics	Oswald Road School, Trees Street Welfare Centre

*Accommodation in these premises is shared with Family Health Services.

Special clinics

Orthopaedic clinics	Lancasterian School, Elizabeth Slinger Road, Manchester, M20 8XA Tel: 445 1259
	Telford School, Bank House Road, Blackley, Manchester, M13 0EF Tel: 740 1897
Child guidance clinics	Cambrian Street, Beswick, Manchester, M11 3FY Tel: 273 1122
	Crossley Street, Gorton, Manchester, M18 8BA Tel: 223 3158
	Harpurhey Centre, Westmorland Street, Manchester, M9 1GN Tel: 205 2857
	Withington Centre, 551 Wilmslow Road, Manchester, M20 9BA Tel: 434 3437
	Wythenshawe Centre, Yew Tree Lane, Manchester, M23 0BA Tel: 998 4130 and 4897
Speech therapy clinics	11 Parsonage Road, Withington, Manchester, M20 9PW Tel: 434 1497
	Baguley, Beswick, Brunswick, Charlestown, Cheetham, Gorton, Hulme, Northern Moor, Northenden, Withington and Woodhouse Park.
School sessions	Bostock Hall, The Birches, Margaret Barclay, Bradford Grange, Cambrian, Crosby Meadow, Crumpsall, Ewing, Gorton Brook, Great Moreton Hall, Lancasterian, Leacroft, Mill House, Park, Piper Hill, Riverside, Shawbrook, Shawgrove, Soss Moss, Telford, Ten Acres, Whitworth, White Moss and Woodside.
Audiometric clinic Ophthalmic clinic Orthoptic clinic Oto-Laryngological	Central Clinic, Byrom Street, Deansgate, Manchester, M3 4PF Tel: 228 2191, Ext. 7443
Enuresis clinics	Brunswick, Cheetham, Gorton, Hulme, Newton Heath, Northenden and Woodhouse Park.

Special Clinics

Haemoglobin clinic

Children are referred to this clinic by school medical officers.

One hundred and thirty-five were referred for primary Hb. estimations and of these 66 were found to be aneamic. Eighty-one children who were under supervision were reviewed and 16 required a further course of treatment. Nine children were referred to hospital for further investigation.

A small survey was carried out which included 100 children in each of the age groups 5 years, 10 years and 15 years. Of the total 300 children, 101 were referred to this clinic but despite several appointments only 38 attended. Of these 10 were found to require treatment.

Skin clinic

After last year's minor "epidemic" this year has been relatively free from cases of ringworm of the scalp. In fact only two cases have been detected. These children were referred to their general practitioners for a course of treatment and the condition resolved quickly.

There were no other cases detected in either family nor amongst school contacts.

Enuresis clinics

Treatment of children suffering from enuresis continued throughout the year at seven clinics.

As in previous years many children were discharged because of failure to keep appointments and maintain regular treatment.

Number of children treated during the year		672
Number discharged:		
Symptom free	41	
Improved	78	
Referred to hospital	23	
Unassessable due to failure to complete attendance	130	272
Number remaining under treatment:		
Improved	250	
Showing no improvement to date ..	150	400
Number awaiting treatment at 31.12.73 ..		63
Total clinic attendances during the year ..		1,609

Ear, nose and throat clinic

I am indebted to Mr. Maxwell J. Maxwell, consultant otolaryngologist, for the following report.

"The satisfactory progress and smooth working of this department noted in the 1972 report has been maintained during 1973, especially with regard to the Central clinic at Byrom Street. Due to factors beyond our control at the hospitals e.g. industrial disputes with ancillary staff and closure of wards for purposes of upgrading, fewer operations were carried out during 1973 as compared with 1972 but in spite of this there was no increase in the waiting list for operations at the end of the year. However, at the Central clinic more cases were sent for and a larger number attended than in the previous year, though the average attendance remained the same. Once again it is worthy of note that there is very little delay in seeing cases, especially new referrals and parents have expressed their appreciation of the prompt service and interest taken. The comparative figures are given below.

Attended	Suspected deafness		Otorrhoea		Other conditions		Total
	New	Old	New	Old	New	Old	
1972	323	926	13	91	311	303	1,967
1973	230	1,089	17	79	273	333	2,021
Did not attend							
1972	206	521	12	61	159	196	1,155
1973	113	670	8	58	125	257	1,231
Notified							
1972	529	1,457	25	151	470	499	3,122
1973	343	1,759	25	137	398	590	3,252
Average attendance:	1972—63 per cent 1973—63 per cent						

There have been fewer cases referred for suspected deafness this year, but the figures are still large enough to justify the careful examination of pre-school children and entrants for hearing defects, and the audiometric services available have been invaluable. The nursing staff at the clinic are now carrying out impedance audiometry in addition to pure tone and these have been most helpful in the diagnosis of exudative otitis media and estimation of progress following treatment. In all 1,335 cases were referred for audiometry of which 774 attended. Two hundred and forty-one cases were referred from this Department and following referral from other departments, 159 were sent to this clinic for further examination. Sixty-one impedance tests were carried out.

We would again like to express our gratitude to the Department of Audiology at the University and to Professor Taylor for their ready help and co-operation. Auto inflation using carnival whistles in selected cases again proved helpful and of 57 cases dealt with nearly 50 per cent improved sufficiently to obviate the necessity for surgical measures. Six children were referred from this clinic for hearing aids. These are of the ear level type which, as indicated last year are more acceptable and more readily worn by children. In spite of this, however, one still comes across the difficult child who initially refuses to wear any aid, but with perseverance and encouragement, this reluctance can be overcome.

The helpful co-operation of the X-ray Department at Booth Hall Hospital is again appreciated and a comparison of the figures with last year are given below:—

Referred for audiometry..	1972	1,714
	1973	1,335
X-rays	1972	**1973**
Sinuses only	172	168
Sinuses and mastoids	1	1
Sinuses and chest	4	3
Mastoids only	2	—
	179	172

The vexed question of adenotonsillectomy which has been a focus of discussion between Paediatricians, E.N.T. Surgeons and family doctors for many years, has again come to the fore recently. In Britain 28·8 per cent of all discharges from hospitals in the 5-9 years age group have been due to adenotonsillectomy which has been the commonest cause of admission to hospital in this age group. Professor C. B. S. Wood of St. Bartholomews Hospital and The London Hospital has recently summed up the position well and has summarised the indication for removal of tonsils and adenoids as follows:—

1. Repeated attacks of tonsillitis, after careful scrutiny of school records, attack rate, throat swab and serum 1gA determination.
2. Quinsy.
3. Recurrent tonsillitis with otitis media assessed as in (1).
4. Evidence of chronic streptococcal infection (especially when acute rheumatism has occurred).
5. Gross obstruction of the air passage.

Results have been considered in a study by Mawson, Adlington and Evans (1967) and these showed a definite improvement in suitable cases summarised in their findings as follows:—

> In the study 404 children were divided into two equal groups, one of which was operated on early and in the other operation was deferred for two years. A noticeable reduction in sore throats, tonsillitis, clinical adenitis and colds, together with weight gain was found in the operated group.

Operations continued to be carried out both at Booth Hall Hospital and the Jewish Hospital and analysis of the figures and a comparison of 1972 are given:—

Operations:

	1972	**1973**
Tonsils and adenoids..	173	141
Tonsils and adenoids and antral lavage	62	8
Adenoids only	14	4
Sinus operation ± adenoids	56	35
Myringotomy, aspiration and grommets	121	110
Examination of ear under microscope	3	3
Nasal cautery or diathermy	25	16
Submucous resection of the nasal septis ..	1	5
Major ear operations including: Mastoidectomy, tympanoplasty, myringoplasty, tympanotomy	6	6
	461	328
Jewish Hospital:		
Tonsils and adenoids..	125	54
Grommet, antral lavage, adenoids etc.	34	24
	159	78

Total in 1972 = 620. Total in **1973** = 406

An anaylsis of the waiting list at the end of 1972 is given:—

Operations waiting at end of:	1972	**1973**
Tonsils and adenoids	90	110
Adenoids only	2	2
Sinus operations ± adenoids and tonsils	14	15
Minor aural operations including Grommets	46	25
Submucous resection of the nasal septum	—	2
Examination of ear under microscope	4	—
Nasal cautery or diathermy	—	4
Major aural operations	7	5
	163	163

Carnival whistles:	1972	**1973**
Improved	30	25
No improvement	20	23
Not tested or did not attend	28	9
	78	57

	1972	**1973**
Hearing aids issued	18	6

"As this is the last report on the work of the ENT Department of the School Health Service likely to be submitted by the present writer in view of the pending changes, I would like to take this opportunity of expressing my very sincere thanks to the nursing and clerical staff at the Central clinic for their unswerving co-operation and assistance during the twenty-five years or more that I have worked here. It would have been quite impossible to deal with the large numbers of children referred without their unceasing hard work and efficiency. Finally may I once again thank the medical officers both of the administration department and of the various school clinics for their help."

Ophthalmic clinic

Mr. P. L. Blaxter, consultant ophthalmologist, continued to attend for one half-day session per week throughout the year. He examined 261 children and an analysis of the types of cases seen and treatment prescribed is given below:—

Cases examined			
Anisometropia	35	Phoria	14
Cataract	3	Ptosis	1
Coloboma	1	Squint	176
Epicanthus	4	Miscellaneous	13
Myopia	14		

Treatment prescribed	
Orthoptic	90
Operative	48
Observation	47
Discharged to local clinics	65
Discharged to Royal Eye Hospital	11

Medical inspections

Routine school medical examinations were carried out throughout the year.

Close liaison with headteachers ensured that psychological and environmental factors affecting a child's health were considered by the school doctor and the health visitors' reports on school entrants were also available to the doctors.

The intermediate examinations were transferred from the 13 year age group to the nine year age group. These examinations were carried out on a questionnaire basis.

Follow up of medical defects found at medical inspections forms an important part of the school health service and the examinations at school include those children who have been found to have a defect at a previous examination or who have been presented for a special examination by parent, headteacher or school nurse. In all cases the parent is notified by appointment.

School doctors inspected 247 school premises. Twenty four recommendations were made to other departments for appropriate action.

Statistical details are given at the end of the report.

The School Nursing Service

The school nursing service was established in Manchester in 1908. Indeed it was a recognition of defects in school children which had led to the development of the child welfare service at an earlier date.

It is interesting to note that in 1923 the then Medical Officer of Health suggested that an integration of the health visitor and school health services would be beneficial. It was not however, until 1967 that this took place. School nursing is a specialised branch of community nursing and this has been recognised in the arrangements being made for the reorganisation of health services.

Cleanliness of school children

One of the important duties of the school nurse is to regularly carry out general hygiene inspections of all school children in the maintained schools. Where persistent infestation is found it is indicative of a problem in the home and every endeavour is made to educate the parents and give them necessary advice.

It is as necessary today as ever it was to warn parents of the risk of infestation and health visitors and school nurses together must continue to work to eradicate this problem.

The figures below show the amount of work done in the schools and clinics so far as uncleanliness is concerned by the school nursing staff.

Table II

	1972	**1973**
Number of inspections for uncleanliness	328,504	315,823
Number of individual children found unclean	14,287	10,715
Number of cleansing notices issued	395	200
Number of cleansing orders issued	195	99
Number of children compulsorily cleansed	144	72
Number of children voluntarily cleansed	4,091	4,558
Number of children examined other than for uncleanliness	18,732	27,780
Number of home visits for uncleanliness	7,405	5,278
Number of home visits for other reasons	8,893	12,212
Number of medical defects found at general inspections	764	671

Prosecutions

There were no prosecutions for uncleanliness during the year.

Table I

	Primary, Secondary and Special Schools		Nursery Schools and Classes	
	1972	**1973**	1972	**1973**
Number of examinations for uncleanliness	241,217	226,784	87,287	89,039
Number of individual children found unclean	12,707	9,951	1,920	764
Number of medical defects found at general inspections	617	496	147	175
Number of children remaining unclean on 31.12.1973	2,970	4,218	88	111

U.V.R. Moorcroft Road and Gorton

Figures for year ending, December 1973.

Number Treated	246
Discharged—treatment complete	133
Ceased to attend	76
Number of new cases	165
Still under treatment	37
Number of treatments given	2,528

	Discharged		*Ceased to Attend*		*Still Attending*	
	Improved	Stationary	Improving	Stationary	Improving	Stationary
Anaemia	1		1	1	1	
Anorexia	14		3	4	1	
Asthma	3					
Bronchitis	3	—	2	—	1	—
Debility	1	—	—	—	—	—
Nasal catarrh	16	2	9	5	6	—
Poor posture	—	—	—	—	—	—
Rheumatism	—	—	—	—	—	—
Skin	16	1	—	1	4	—
Other	76	—	29	21	24	—
Total	130	3	44	32	37	—

Audiometric screening tests of hearing

During the year due to a shortage of staff trained in the use of the transistor audiometer the number of five year old entrants screened for hearing loss was lower than in previous years. It is hoped this deficiency be remedied in 1974, as three additional school nurses have now undertaken this work. Those children not tested in 1973 will be examined in their sixth year. The following table shows the work carried out during the year.

Total number of children tested	8,485
Number of children with normal hearing	7,489
Number of children with hearing loss	996
Number of five year old children tested	4,936
Number of five year old children with normal hearing	4,544
Number of five year old children with hearing loss	392
Number of children over five years tested	2,841
Number of children over five years with normal hearing	2,439
Number of children over five years with hearing loss	402

Re-inspection of children who had a hearing loss at a previous inspection:

Number of children tested	681
Number of children with normal hearing	485
Number of children with hearing loss	196

Special referrals from school medical inspections and other sources:

Number of children tested	27
Number of children with normal hearing	21
Number of children with hearing loss	6

As in previous years children with a hearing loss were referred to the local school clinic for a clinical examination by the school medical officer and treatment or referral to the Department's consultant otologist arranged.

Urine survey

During the year arrangements were made for samples of urine to be collected from children, shortly after their first school medical examination. The samples were taken to the Public Health Laboratory at Withington Hospital and examined to determine the presence of urinary infection. The results were forwarded to the School Health Service and children found to have urinary infections were referred to the school clinic or, with their general practitioners approval and parents consent, to hospital.

The number of children examined during the year was as follows:—

No. of specimens taken	No. referred to hospital	No. referred to school clinics
3,100	156	94

School Dental Service

The school dental service started as a treatment service in 1915 with the provision of a dental surgery in the newly opened Stretford Road Clinic.

Up to the opening of this clinic the dental service had been, since the inception of a school health service in 1906, an inspection and advice service only—the response to which had been negligible.

The first reference to dentistry as part of the school health service was in the Senior Medical Officer's report for 1906/7 on the results of a dental inspection—by medical officers—of the dental condition of 508 girls attending Duke Street school. Four hundred and thirty-nine had decayed teeth with an average of 2·8 decayed teeth per pupil.

In all the subsequent Senior Medical Officer's reports from 1906/7 onwards the Senior Medical Officer commented on the general poor dental condition of the inspected pupils and the poor response to advice and on obtaining the necessary treatment, and also the great magnitude of the task in providing treatment. It was estimated in the Senior Medical Officer's report of 1910/11 that 17,000 pupils (out of a school population of 100,000) had ''bad'' teeth. The medical officers had three grades for dental conditions —''fairly good'' less than six decayed teeth ''bad'' more than six decayed teeth and ''dirty'' which meant they were not only in want of the use of a toothbrush but were grossly or offensively foul.

The Senior Medical Officer reported in December 1913 that for any progress to be made in improving the dental condition of pupils, dental clinics where treatment could be given must be provided. He recommended that six school clinics should be provided each having a dental surgery, and as previously stated the first of these opened in 1915. From 1915 onwards, despite the financial crisis in the late twenties and early thirties, up to 1933 twelve dental clinics with a reasonable staffing position had been provided.

In 1931 general anaesthesia for extraction was introduced.

A Senior Dental Officer to oversee, organise and plan the service was appointed in 1939. On his return from war service in 1945, he introduced ''orthodontics'' initially on a limited scale, and in 1946 a dental laboratory was opened.

When the National Health Service Act 1946 came into force in July 1948 it was agreed that a joint dental scheme, as recommended by the Ministry of Health, should be introduced for patients eligible for treatment by the local authority under this Act and the Education Act 1944. The Senior Dental Officer was to be responsible for the organization and future planning of the joint service starting in 1948.

The introduction in 1948 of the National Health Service saw the decimation of the local authority services as rewards to dental surgeons were so much better within the General Dental Services. It was not possible to comply with the demands of the new acts and provide sufficient dental man-power to meet the demand for dental treatment of the so called ''priority classes'' and, in addition, the dental equipment in the school dental surgeries was not suitable for the treatment of mothers.

It was not until the 1955 re-equipment of all the dental surgeries, a slight improvement in dental man-power and the addition of a further dental technician in the laboratory, was it possible to provide a full integrated comprehensive joint service.

From 1955 onwards many improvements have taken place in accommodation, dental equipment, laboratory service and staffing. This has enabled a far more comprehensive treatment service to be provided for more people but it will take many more years still before the whole city can be provided for.

The situation at present is that twelve purpose built health centres and combined clinics having 23 modern dental surgeries, one with a very fine dental laboratory for six technicians, have been provided. Seven of these clinics are new, the remaining five replacing obsolete premises. In the pipeline are a further seven new health centres/combined clinics, three new, four replacements.

By the end of this decade there should be sufficient surgery accommodation to satisfy all demands on the service.

In 1959 the service also became responsible for the treatment of mentally handicapped children and by 1965, with the advent of improved anaesthetic drugs, techniques and personnel it was then possible to provide fully comprehensive treatment for all these children irrespective of the extent of their handicaps.

Due to the uneven distribution of general dental practitioners in the city, a number of residents in ''Aged Peoples Homes'' have been unable to obtain dental treatment. Although it does not come under the remit of the department since 1972 on humanitarian grounds treatment has been provided for several of these homes.

In 1964 there was the introduction of a new type of dental worker, the ''dental auxiliary'', girls specifically trained to undertake routine conservative treatment for children under the direction of dental surgeons. To date, several of these girls have and are working for the authority and making an excellent contribution to the efficiency of the service.

In 1946 the Manchester Dental Hospital created a department of children and preventive dentistry and since that date there has been constant co-operation between the local authority dental service and the children's department and they are responsible for providing dental treatment for three of the authority's schools.

A much greater degree of co-operation will take place from 1975 onwards in the clinical training of dental students. Two specially designed dental suites in two health centres will have a dental officer in charge, a dual appointment by the Local Authority and the Manchester Dental Hospital, who will be responsible for the final year students working in these clinics. Should the results come up to expectation this should make a worthwhile contribution to the students, the Manchester Dental Hospital and the then ex Local Authority Service.

The service has co-operated since 1948 with the Department of Education and Science and the Department of Health and Social Security in the quinquennial survey on dental caries in five year old and 12 year old children. The tables below give the results.

Five year old pupils :—

Percentage of children with no decayed, missing or filled teeth

1948	1953	1958	1963	1968	1973
14	11·9	11·9	17·4	20	26·4

Average number of decayed, missing or filled teeth per child

1948	1953	1958	1963	1968	1973
4·7	5·3	4·9	4·86	4·36	3·72

This shows over the 25 years a marked improvement in the percentage of children with no decayed, missing or filled teeth and also an improvement in the average number of decayed, missing or filled teeth per child.

Twelve year old pupils :—

Percentage of children with no decayed, missing or filled teeth.

1948	1953	1958	1963	1968	1973
8·6	14·2	7·1	7·8	7·0	7·7

Average number of decayed, missing and filled teeth per child

1948	1953	1958	1963	1968	1973
3·7	3·7	4·1	4·3	4·5	4·2

This shows a fairly constant level of decayed, missing and filled teeth and average number of decayed, missing and filled teeth per child over the whole of the 25 years.

In 1971 the City Council accepted the need as a public health measure for the improvement of the dental condition of the population the regulating of the flouride content of Manchester's water supply to one part per million. When implemented this should in the long term modify dentistry from a wholly treatment service to a more preventive and less of a treatment service and make less demand on scarce qulified personnel man-power situation.

The Committee can feel satisfaction in handing over to the Area Health Authority an efficient, well equipped, fully comprehensive dental service for children with forward planning to the end of the decade.

Staff

Staff in post at the start of the year was the equivalent of 19 full-time dental officers and four dental auxiliaries. The year ended with the equivalent of 18 dental officers and six dental auxiliaries. The equivalent time of one full-time officer was given to the maternity and child health services.

Development

No new health centres or clinics were opened during the year. However, Varley Street Combined clinic with three dental surgeries will commence working early in 1974. This clinic takes the place of the old Ancoats and Butler street dental clinics. The policy of upgrading surgeries in older clinics with modern dental equipment continued.

Inspection and treatment

The dental officers and auxiliaries devoted 9,238 sessions to inspection, treatment and dental health education, 64,790 pupils were inspected in schools and clinics; of these 40,267 required treatment. Treatment was given to 18,566 children and a total of 20,357 courses of treatment were started, 17,915 being completed. Total attendances at the clinic for inspection and treatment was 65,964. Treatment consisted of 46,746 fillings, 34 inlays, 59 crowns and 49 splints, 7,823 permanent and 21,549 deciduous teeth were extracted and 8,483 general anaesthetics were administered, 207 pupils were provided with five full dentures and 212 partial dentures, 12 dentures were cast metal plates. Orthodontic treatment was started for 391 children: 256 completed treatment, 523 removable and 39 fixed appliances were used. There were 1,708 pupils X-rayed.

Sickledex tests for latent sickle cell anaemia were routinely given to children of West African and West Indian origin, who required a general anaesthetic. All positive cases, about 10 per cent, were referred to hospital haematology departments for further investigation.

Children in attendance at Special Schools, the majority of whom, due to their physical and/or mental handicaps, are not amiable to dental treatment in the usual accepted manner, were provided with a functional dentitian. Fillings and extractions were done under intra-venous or inhalation anaesthesia administered by a consultant anaesthetist, 103 children had 462 fillings and 302 extractions. 137 general anaesthetics were administered.

Dental health education occupied 160 sessions, 20,000 primary school children were given talks, demonstrations and films in school and in addition prophylaxis and chairside dental health instruction were given to 6,923 pupils. The dental auxiliaries each used one session per week for the topical application of flourides as a preventive dental caries measure for pupils who had completed a course of treatment. The present need and demand for treatment is preventing this measure from being introduced for those pupils who do not require any dental treatment. A mobile dental caravan with a dental health exhibition was on site at the Manchester Expo 1973 Transport Exhibition which lasted for three weeks. The caravan was staffed continuously during the exhibition. Hundreds of visitors, including school parties, parents with their children, older children on their own visited the caravan. Dental health, careers in dentistry, demonstrations of modern dental treatment techniques and use of the dental equipment were given. It was an exhausting but very successful public relation exercise for dentistry and the school dental service in particular and the profession as a whole.

Research

At the request of the Department of Education and Science the dental service co-operated in the National Quinquennial Survey of prevalence of caries in five year old and 12 year old school children. Previous surveys were made in 1948, 1953, 1958, 1963 and 1968.

The schools used represented a fair cross section of the City. Once again due to reorganization and slum clearance it has not been possible to use all the schools as used in the previous surveys. However, it has enabled us to include one senior and one infant school each with a high immigrant population.

Five year old pupils

In comparison with previous years it shows a significant reduction in decayed, missing and filled teeth and a further 6 per cent improvement in which with no decayed, missing and filled teeth. The school with the high immigrant population showed no statistically significant difference from the other schools.

Twelve year old pupils

In comparison with previous surveys a very slight improvement in percentage of children with no decayed, missing and filled teeth and a similar slight improvement in number of decayed, missing and filled teeth per child. However, in this age group, the school with the high immigrant population had 17 per cent with no decayed, missing and filled teeth. This made 1 per cent overall improvement.

As an exercise the decayed, missing and filled teeth in both age groups was taken excluding the children with no decayed, missing and filled teeth. A comparison was made with the five previous surveys and it was found that the number of decayed, missing and filled teeth was fairly constant.

In each age group a ratio of decayed, extracted and filled teeth has been made. This indicates that the 12 year old children are receiving regular dental treatment, but this does not appear to apply to the same extent in the five year old children.

This suggests an urgent need for implementation of fluoridation and if possible an increase in the number of dental auxiliaries to provide more treatment for the younger child.

Five year old pupils :—

		Ratio of decayed, missing, filled teeth
Number examined	727	
Number with decayed, missing and filled teeth	535	
Number of decayed, missing and filled teeth ..	2,708	
decayed	1,558	4·6
extracted	809	2·7
filled	341	1·0

Percentage with no decayed, missing, filled teeth	26·4 per cent
Average decayed, missing, filled teeth per child	3·72

Percentage of children with no decayed, missing or filled teeth

1948	1953	1958	1963	1968	1973
14	11·9	11·9	17·4	20	26·4

Average decayed, missing and filled teeth per child

1948	1953	1958	1963	1968	1973
4·7	5·3	4·9	4·86	4·36	3·72

Average number of decayed, missing and filled teeth per child excluding children with no decayed, missing or filled teeth

1948	1953	1958	1963	1968	1973
5·5	6·0	5·5	5·9	5·5	4·8

Twelve year old pupils:—

		Ratio of decayed, missing, filled teeth
Number examined	712	
Number with decayed, missing and filled teeth	658	
Number of decayed, missing or filled teeth ..	3,023	
decayed	681	0·31
extracted	517	0·28
filled	1,825	1·0

Percentage with no decayed, missing or filled teeth	7·7 per cent
Average number of decayed, missing and filled teeth per child	4·2

Percentage of children with no decayed, missing or filled teeth

1948	1953	1958	1963	1968	1973
8·6	14·2	7·1	7·8	7·0	7·7

Average number of decayed, missing or filled teeth per child

1948	1953	1958	1963	1968	1973
3·7	3·7	4·1	4·3	4·5	4·2

Average number of decayed, missing or filled teeth per child excluding children with no decayed, missing or filled teeth

1948	1953	1958	1963	1968	1973
4·1	4·3	4·4	4·6	4·8	4·5

Dental care of children in special schools

Children in attendance at special schools, due to their physical and/or mental handicaps, were not amenable to dental treatment in the usual accepted manner. The majority were provided with a functional dentician, with their fillings and extractions done under intravenous or inhalation anaesthesia administered by a consultant anaesthetist.

Treatment given	103 children had 462 fillings, 302 extractions and 137 general anaesthetics were administered.

Dental laboratory

The following table gives the work completed during the year by the dental laboratory for both the School Dental Service and the Maternity and Child Health Services:—

Removable orthodontic appliances	523
Fixed orthodontic appliances	25
Dentures	309
Crowns	52
Inlays, cast caps and splints	85
Chrome-cobalt plates	22
Orthodontic record models	602

Maternity and child health services

The equivalent of almost one full-time officer was given to expecting and nursing mothers and pre-school children. A return of this work is given below.

	Treated	Treatment completed	Attendances	Fillings	Extractions	General Anaesthetics	Dentures
Mothers	202	148	613	426	308	37	92
Pre-school children	482	368	856	513	519	160	—

Speech Therapy Service

At the beginning of 1973 the speech therapy department had the equivalent of ten full-time members of staff but encouragingly ended with 15·3, i.e. a full establishment. During the year a separate audiology department was formed, into which two speech therapists/audiologists transferred.

Five of the members of staff appointed since August 1973 are newly qualified speech therapists and at present there are only three full-time therapists (including the senior) with more than two years' experience. It is to be hoped that following the Quirk Report recommendations, there will be an improved career structure in the profession enabling the Service to attract, and retain, more experienced therapists without whom it is impossible to give adequate supervision, guidance and help to the newer members.

Towards the end of 1973 it was possible to recommence speech therapy at schools and clinics which had been without this service and also to staff for the first time the new health centre at Beswick. The out-patients clinic at the Lancasterian School closed, as did the clinic at Hathersage Road, the majority of children being transferred to the new Central Clinic in Parsonage Road or to Brunswick Street health centre. The distribution of speech therapists at the end of the year shows that 7·2 are in health centres or school clinics and the remaining 8·1 work in special schools.

The number of children awaiting therapy in December 1973 was 566—of whom 264 had been interviewed and were waiting to commence therapy; the remaining 302 had not been interviewed.

The department continued its supervision of the clinical training of speech therapy students from the Elizabeth Gaskell College; the fall in the number of

Speech therapy session - Brunswick Health Centre

student attendances this year (466 compared with 627 in 1972) being related to the fewer therapists with sufficient experience in the department at present.

	Health Centres+ School Clinics	Assessment Units+ Special Schools	1973 Total
Total referred (—5)	715 (230)	192 (37)	907 (267)
Source of referral			
School medical officers ..	422	29	451
Teachers	83	133	216
Family Health	89	0	89
Speech therapists	37	28	65
G.P.'s/Health visitors	25	1	26
Relatives..	19	1	20
Others	40	0	40
Total treated	1577	845	2422
Total case load	918	680	1598
Interviewed+ waiting therapy	169	95	264
Total discharged	473	129	602
(a) Total discharged after therapy	364	123	487
Reason :—			
Treatment complete	196	47	243
Ceased attendance	86	0	86
Left school	13	50	63
Left area	61	23	84
Manchester hospitals ..	7	0	7
Deceased	1	3	4
(b) Total discharged without therapy	109	6	115
Reason :—			
Treatment not necessary ..	20	6	26
Refused therapy	20	0	20
Did not attend interviews ..	69	0	69
Transfers in Department	295	42	337
Interviewed	490	174	664
Screened (T.N.N.)	229 (52)	241 (88)	470 (140)
Total attendances	7623	7320	14943
Total failed appointments ..	3795	333	4128
Parent guidance sessions.. ..	66	60	126
Total suspended over two months during therapy ..	389	274	663
Waiting list (not interviewed) ..	285	17	302
Student attendances	396	70	466
Visitors	147	39	186
Visits	200	14	214
Parents evenings talks/meetings	138	76	214

Shawbrook Pre-School Centre

The centre provides diagnosis, treatment and parent guidance for all pre-school and special school children suspected of having any type of auditory impairment.

Children are normally seen within three weeks of referral. They may then be supervised at the centre, at home, in a nursery or referred for appropriate treatment.

Liaison is maintained with the staff of the peripatetic service and the schools for hearing impaired children.

Referral to the centre is as follows:—

Maternity and child health centres	203
Special schools	108
Day and residential nurseries	31
Others speech therapists, health department, general practitioners	17

The following is a summary of the findings and action taken for (a) school age and (b) pre-school age referrals.

School age children

Diagnosis

Perceptive deafness	3
Conductive deafness	23
Hearing normal	100

Action

Supervision at the centre	24
Referred for E.N.T. investigation	23
Referred to peripatetic service	1

Pre-school children

Diagnosis

Perceptive loss	3
Conductive loss	54
Speech and language disorders	26
Hearing loss and language disorders	5
Other disorders	8
Hearing normal	120
Did not attend	16

Action

Referred for E.N.T. investigation	50
Supervision at the centre	76
Referred for speech therapy	20
Referred to peripatetic service	2
To receive weekly guidance at home or the centre	5
Referred for other investigations	8

During the course of the year regular audiological assessments were carried out on:

95 children attending Whitebrook School for the Deaf
102 children attending Shawbrook School for the Hearing Impaired
16 children attending Ewing School for dysphasic children

In addition 13 children were seen at Whitebrook School and 12 children at Shawbrook School to assess their suitability for admission to these schools.

The total number referred this year showed a 30 per cent increase and is a most encouraging sign.

An audiologist attended at the Ewing school for dysphasic children and Whitebrook school for deaf children.

A summary of the audiological lists carried out at the Central school clinic is given in the report of the consultant E.N.T. surgeon.

Liaison between the School Psychological and Child Guidance Service and the Health Department

Consultations between the staff of the Child Guidance Service and the Senior Medical Officer continued and have increased considerably during the past year. Many discussions took place informally and co-ordination between the work of the School Health Service and the Child Guidance Service has been widened. It has been possible to arrange for educational psychologists concerned with particular children to meet the school medical officer at the special schools so that they have been able, as a team to discuss the best way of helping individual children.

The Senior Medical Officer has visited Soss Moss Residential School regularly to help with some of the emotional problems which inevitably arise in children suffering from epilepsy. It has been possible to arrange hospital psychiatric consultations for some of the children at Pendlebury on the same day as the medical officer's visit to that hospital. This has made it possible to maintain personal contact between the hospital, the child and his parents, and the school.

Copies of the educational psychologists' reports are sent to the Senior Medical Officer so that medical problems can be detected and information passed on for the school medical records. During 1973 there were 369 such reports up to December 13th which is an increase in number on 1972.

Education welfare officers continued to refer cases through the Senior Medical Officer for referral to the Child Guidance Service. Informal discussions frequently took place between the educational welfare officers and the Senior Medical Officer before further action was taken to bring cases to court for non-attendance at school.

The Alice Briggs Hostel is now fully staffed and has a full complement of boys. Regular conferences took place to discuss the progress of the resident boys and the suitability and order of priority for the boys on the waiting list for placement.

Chiropody

During the year the chiropodial work has been hampered by shortage of staff. Treatment of plantar warts takes up much of the chiropodists' time. Ill-fitting footwear and hosiery are often not appreciated by parents to be the cause of children's foot discomfort, and greater availability of foot health education has helped both parents and children.

An additional clinic was commenced at the Beswick health centre in February. There are now eleven clinics at which children may receive treatment.

The number of treatments given, 11,358, was an increase of 2,231 compared with the previous year.

Appliance-making has continued, as in previous years, at Withington Hospital. Attendance throughout the period has been good, and we have continued to receive the co-operation of parents and head teachers.

Statistical details are as follows:—

Number of new cases	71
Number of re-inspections	606
Total number of treatments	677
Number of inlays prepared	200
Number of insoles prepared	15
Toe prop appliances	2

Convalescent treatment

Arrangements have continued as in previous years to provide convalescent treatment for debilitated children and for children in need of this treatment following operations and specific illnesses.

The children were admitted to the Dr. Garrett Memorial Home, Conway, which is owned and administered by the Manchester Health Department.

A small party of children from the Margaret Barclay School for physically handicapped children was admitted to Dr. Garrett's during school holiday periods together with a small number of children from the Soss Moss School for epileptic children.

Convalescent treatment has also been beneficial to underprivileged children living in unsatisfactory home conditions.

During the year 1,721 children were recommended for convalescent treatment, the majority by school medical officers; others by medical officers in child health centres, hospital consultants and general practitioners. The number of children who received convalescence was 1,075. There were 180 children who did not attend for various reasons. At the end of the year there were 466 children awaiting treatment.

The following table shows the number of children placed in the Dr. Garrett Memorial Home, Conway.

Number of children in residence at 1st January, 1973	87
Number of children admitted during 1973	1,074
Number of children discharged during 1973	1,161
Number of children in residence at 31st December, 1973	Nil

The total number of children discharged includes 17 who were brought home against the advice of the visiting medical officer.

The Invalid Children's Aid Association placed one child at a convalescent home in West Kirby.

Of the 1,075 children who received convalescent treatment 125 were under five years of age.

Maternity and child health

Arrangements have continued for children under school age to be treated for certain defects at school clinics.

During the year, 371 children attended, and the following table gives details of the defects by age group:—

Age in yrs.	Nos. treated	Minor ailments	Orthopaedic	Defective vision	Skin	Speech defects	Chiropody
0–	17	—	7	10	—	—	—
1–	46	5	6	20	13	1	1
2–	63	10	6	15	12	20	—
3–	102	18	3	11	21	49	—
4–	143	47	11	7	27	47	4

Details of dental treatment given to expectant mothers and young children under the joint scheme for dental provision as required by the National Health Service Act, 1946, are given in the report on the school dental service.

Immunization programmes

Vaccination against tuberculosis

B.C.G. vaccination was again offered to school children who had attained the age of 13 years at the beginning of the school year.

Six thousand six hundred and seventy-two children were skin tested, of whom 5,225 gave negative reactions. The positive reactors were X-rayed at the Chest Clinic under arrangements made with the Consultant Chest Physician.

B.C.G. vaccination was given to 5,065 children.

Immunization against diphtheria and tetanus

As in previous years immunization continued and children whose parents had consented were immunized by medical officers either at schools or clinics.

There were 5,125 children immunized, 401 completed a primary course and 4,724 received booster doses.

Vaccination against poliomyelitis

Oral vaccination was again carried out during the year for children requiring protection against poliomyelitis. Parents of all children attending primary schools were invited by letter to give consent to their children receiving vaccination for the first time or to receive a reinforcing dose as necessary.

School nurses visited the schools to administer the appropriate doses on sugar cubes.

Children absent from school at the time of the visits were given appointments to attend at their local school clinics.

Primary vaccination was given to 450 children and 4,489 received booster doses.

Vaccination against rubella

Vaccination was offered in accordance with the recommendations issued in July 1970 by the Department of Health and Social Security to 6,714 school girls in the age groups 12–13½ years. Consents were received for 5,283 (79%) to have the vaccination.

The total number vaccinated was 5,005.

Miscellaneous medical examinations

All staff newly appointed to the service of the Education Committee were required to satisfy the Principal Medical Officer, School Health Service as to their medical fitness. In all cases a questionnaire was completed giving a statement of medical history. In the majority of cases a full medical examination was not considered necessary. X-ray examinations were carried out wherever the candidate had contact with children. The same procedure was followed in the case of newly appointed non-teaching staff of Manchester Institute of Science and Technology, a charge being made to the University for this service.

Applicants for School Crossing Patrol Wardens continued to have hearing and vision tests and where it was considered necessary, a full medical examination. This was done at the request of the Manchester and Salford City Police.

In accordance with requirements laid down by the Department of Education and Science, arrangements were made for the medical examination of all Manchester students seeking admission to Colleges of Education in

Manchester and other areas. Students in Manchester Colleges, who had completed a teacher training course were medically examined. Statistics and details of reports, including an X-ray examination, together with lists of absentee students were sent to the Department of Education and Science. All teachers entering the profession for the first time from industry or commerce were also examined. Entrants to non-teachers training courses at Elizabeth Gaskell College, Hollings College and the College of Nursery Training, also completed a medical questionnaire.

Staff suffering from disability or prolonged ill health were medically examined, and where indicated, a recommendation was made for retirement on medical grounds. Non-superannuated staff retiring for medical reasons, and who were entitled to the payment of a gratuity were also examined.

Statistical details are as follows:—

Teachers

Total number of questionnaires received	645
Total number of medical examinations	147

Non-teaching staff

*Total number of questionnaires received	1,776
*Total number of medical examinations	90
School Crossing Patrols hearing and vision tests	45
School Crossing Patrols medical examinations	15

Staff retiring through disability

Medical examinations	43

Students entering Colleges of Education

Medical examinations	754

Students leaving Colleges of Education

Medical examinations	1,348

Students entering other Colleges

Total number of questionnaires received	459
Total number of medical examinations..	3

*Includes University of Manchester Institute of Science and Technology.

Mass Radiography

The mass radiography service continued to carry out the X-ray examination of students entering colleges of education, students leaving the five Manchester colleges of education, newly appointed teachers and staff of the Education Committee.

There were 4,522 examinations carried out.

Employment of children

The City of Manchester Bye-Laws permit school pupils aged 13 years and over to undertake part-time employment during specified times out of school hours, provided they are found to be physically fit for such employment and have been issued with a licence by the Education Committee.

During the year 1973, 1,628 children were examined and of these 8 were declared unfit. A small number of these children were employed in entertainment such as pantomime dancing troupes. The majority intended to pursue part-time employment such as paper delivery rounds, assisting in shops or helping with milk rounds.

Children who were found to be suffering from minor ailments were granted provisional certificates for employment until treatment was completed.

Infectious diseases

School returns 1973

	Jan.	Feb.	Mar.	April	May	June	July	Sep.	Oct.	Nov.	Dec.	Total
Measles	21	58	45	27	48	32	18	20	57	75	22	423
Whooping Cough	—	—	4	3	1	3	1	4	6	20	14	58
Scarlet Fever	6	16	24	5	5	10	5	2	5	3	3	94
Scarletina	7	7	31	2	10	2	6	24	4	8	2	103
Chickenpox	138	163	158	73	148	122	72	30	28	26	56	1,013
German measles	26	87	91	63	152	165	56	6	36	47	24	753
Mumps	34	26	24	58	43	38	36	2	44	20	32	357
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis	—	3	—	—	—	2	1	1	—	1	—	8
Dysentery	1	1	—	2	1	1	—	4	2	—	—	12
Enteritis	4	—	—	—	—	—	—	—	2	3	1	10
Food poisoning	—	—	2	—	—	1	—	1	3	2	—	9
Infectious jaundice	5	1	2	2	1	4	3	5	4	1	—	28
Glandular fever	—	3	2	—	1	4	3	1	9	—	1	24
Infections of the Skin												
Ringworm Scalp	2	—	—	—	—	—	—	—	—	—	—	2
Body	—	—	—	—	2	—	1	—	3	1	1	8
Impetigo	14	14	22	4	11	9	9	28	25	23	5	164
Scabies	13	28	33	9	15	26	6	29	22	12	7	200

The above tables give a monthly summary of the number of children suffering from infectious diseases who were reported by headteachers each week. In addition information was received concerning children reported officially to the Medical Officer of Health. Liaison was maintained with headteachers and education welfare officers concerning exclusion of infected children and their contacts from school, when this was indicated. Reports of follow up by the public health inspectors and health visitors were also received.

Tuberculosis

Notifications were received in respect of eight pupils at primary schools and 11 pupils of secondary school age.

Investigations of contacts were carried out at 13 schools and one day nursery and no further cases of tuberculosis were discovered.

Forty child contacts of adults suffering from tuberculosis were given B.C.G. vaccinations and 85 were X-rayed.

The Chest Clinic continued to inform the School Health Service of school children who were referred to the clinic because of suspected tuberculosis. The statistics are as follows:—

Number of children 0–14 years examined	3,617
Number of children 0–14 years notified as tuberculosis	19
Number with respiratory tuberculosis	16
Number with non-respiratory tuberculosis	3
Number of B.C.G. vaccinations carried out for school children	209

Handicapped pupils

During the year 243 children under 5 years were examined and classified as follows:—

Partially sighted	4
Partially hearing	17
Deaf	9
ESN	64
ESN(s)	29
Physically handicapped	69
Delicate	17
Speech defect	13
Epileptic	7
Autistic	3

Eleven children were recommended for ordinary schools and twenty-three children were referred for review.

Recommendation for admission to special schools were as follows:—

Day school for partially sighted	3
Day school for partially hearing	2
Day school for the deaf	8
Residential school for the deaf	1
Day school for ESN pupils	51
Day school for ESN(s) pupils	34
Day school for physically handicapped	27
Day open air school	1
Residential open air school	2
Day school for austic pupils	3

Three hundred and twenty children were referred for ascertainment or observation by the Family Health department and 46 children from other sources e.g. hospital consultants, headteachers, speech therapists and parents.

Six hundred and thirteen children over 5 years of age were examined and classified as follows:—

Blind	7
Partially sighted	6
Partially hearing	1
Deaf	2
ESN	357
ESN(s)	15
Speech defect	2
Epileptic	45
Physically handicapped	25
Delicate	79
Maladjusted	74

43 children were unclassified and were referred for review.

Recommendations for admission to special schools were as follows:—

Residential school for blind	7
Day school for partially sighted	4
Day school for deaf	2
Day school for ESN pupils	148
Residential school for ESN pupils	14
Day school for ESN(s) pupils	7
Day school for physically handicapped	8
Residential school for epileptic pupils	3
Day open air school	46
Residential open air school	25

78 pupils were reviewed in the following categories:—

Partially sighted	1
ESN	34
ESN(s)	5
Epileptic	30
Physically handicapped	4
Delicate	4

Twenty-two pupils were examined prior to receiving home tuition.

Final assessments of school leavers were carried out and the careers officer was informed of 214 pupils as follows:—

Partially sighted	6
Deaf	4
Partially hearing	9
ESN	154
Epileptic	4
Physically handicapped	25
Delicate	10
Maladjusted	2

Pupils in attendance at the day and residential special schools are reviewed regularly by school medical officers. A physiotherapist is in attendance at the four day special ESN(s) schools, where children in the Special Care Units and other children with orthopoedic defects are given treatment. Parents of children awaiting admissions were encouraged to bring their children for treatment and some severely subnormal children had become mobile with treatment prior to admission. Physiotherapists endeavoured to be present when a consultant reviewed a child at hospital.

The following report has been received from Mrs. Saxby, Superintendent Physiotherapist at Piper Hill School:—

No. of children treated	34
No. of group therapy	26
New patients	6
Pre-school children	8
No. reviewed by orthopaedic consultants	10
No. of visits to consultants	16
No. of children seen by school medical officer	79
Hospital, clinic, or appliance centre visits	20
No. of treatment sessions	1,918

Specific treatments:

Stretchings, mouldings, individual exercise	2,315
Mobilising in calipers, re-ed in walking	558
Splinting, P.O.P.	175
Inhibiting positioning	690
Apparating	592
Postural drainage	364
Breathing exercises	333
U.V.R., I.R.R. or electrical stimulation	7
Hydrotherapy	61
Pre-school home programming	20
Reviews	176
Feeding co-ordination	194
Group exercises	251
Assessments	6
Patterning	124
Remedial exercises, individual group	—

Analysis of cases treated:

Spina bifida		1
C.P. spastic quadraplegic		3
	Athetoid	4
	Ataxic	—
	Hemiplegics	4
	Hypotonia	1
	Rigidity	1
Hydrocephalus		4
Foot defects		10
Knee eg. genu valgum		1
Spinal deformities		1
Postural		1
Chests		3
Mongols		4
S.S.N. non-mobile		5
Blind or partially sighted		1
Miscellaneous:	Scapho—cephalus	1
	Epileptic	1
	Inco-ordination	1
	Prahder—Willis syndrome	1

The following report was received from Mrs. Bromilow, physiotherapist at Crosby Meadow School:—

For the first half of this year physiotherapy treatments were carried out at the school five half days per week, and approximately seven children treated each half day.

For the second half of the year treatments were carried out two half days per week and approximately five children were treated each half day.

Treatments were largely aiming at advancing physical development of physically handicapped children in the special care unit, although a few treatments were for orthopaedic conditions.

Twenty-three children of school age were issued with hearing aids. Close liaison was maintained with the peripatetic teachers for the hearing impaired and visually impaired children who are in attendance at the ordinary schools.

Margaret Barclay School

During this year 38 residential and 10 day pupils were in attendance. The following table indicates the conditions for which the children were admitted:

Cerebral Palsy	21
Spina Bifida	16
Muscular Dystrophy	4
Infantile Dystrophy	2
Arthrogryphosis	2
Cerebellar Astrocytoma	1
Post-poliomyelitis paralysis	1

In recent years particular interest has been given to find ways in which traditional physiotherapy treatments of proven value may be complemented by a more intensive interdisciplinary approach to a child's problem of development. An analysis is made of the motor or learning difficulty and the individual training programme is carried out with the aid of 40 volunteers.

The unit operates under the joint guidance of a remedial teacher and physiotherapist.

Telford School

The work of the physiotherapy department continues as in previous years despite changes of staff. The orthopaedic consultant visits the school twice a month and the children are examined regularly by a school medical officer.

The accompanying table shows the range of conditions treated.

	Patients		
	In	Out	Total
No. of children treated	130	136	266
Total No. of attendances	14,065	408	14,473
No. of examinations by surgeon	102	113	215
No. of children referred to hospital	5	7	12
No. of children referred for X-rays	9	5	14
No. of treatments given:	13,963	295	14,258
Hydrotherapy	207	—	207
Plaster of Paris	2	1	3
Electrical treatment (including UVR and IRR)	21	249	270
Stretchings	8,439	—	8,439

Remedial exercises (individuals)		4,133	45	4,178
Classes	Co-ordination	256	—	256
	Back	19	—	19
	Hand	292	—	292
	Muscular dystrophy	192	—	192
	Spina bifida	402	—	402
Appliances:				
Prince & Fletcher, Pooles T.O. M. of H.		308	3	311
Diagnosis:				
Anterior poliomyelitis		2	—	2
Cerebral palsy		48	8	56
Congenital deformities (Thalidomide)		3	—	3
Foot deformities		—	22	22
Perthes		1	1	2
Scoliosis		3	—	3
Spina bifida		34	3	37
Arthrogryphosis		2	—	2
Congenital heart disease		8	—	8
Muscular dystrophy including spinal muscular atrophy		9	—	9
Haemophilia		7	—	7
Osteo-genesis imperfecta		1	—	1
Amputations		1	—	1
Hydrocephalus		4	1	5
Neurofibromatosis		1	—	1
Klippel Feil syndrome		1	—	1
Flat feet		—	56	56
Toe deformities (hallux valgus and overiding toes)		—	22	22
Torticollis		—	3	3
Sacral agenesis		3	—	3
Hand injuries		—	2	2
Metatarsalgia		—	2	2
Kyphosis		—	4	4
Os calcis apophysitis		—	1	1
Talipes		1	4	5
Knock knee		—	7	7
Post Tb.		1	—	1

Lancasterian School

Mr. Evans, consultant orthopaedic surgeon, has sent the following report:—

"This Annual Report is prepared as November draws to an end. On reflection, the work has again proved as varied and interesting as ever. We have been joined by Mr. Harvey Bertfield who has now taken on the orthopaedic care of the out-patients clinic. This again has the advantage that the clinical facilities of the University Hospital of South Manchester are available to the schools and its service.

The physiotherapy treatments have again shown an increase over the year and this reflects the amount of hard work put into the department by the staff.

I am pleased to report that archery has been introduced as a remedial activity to add to the other more orthodox activities and treatment available to the children.

We look forward with interest to the changes that the re-organisation of administrative boundaries will bring to the school and the associated health services.

The year ended with a demonstration of handicapped children to the senior year of the physiotherapy school at the University Hospital of South Manchester."

During 1973 two physiotherapists joined the staff. The variety of treatment has been increased to include ultra-violet ray treatments and archery for pupils in attendance at the school.

The staff have attended refresher courses and are particularly interested in the formation of the Association of Paediatric Physiotherapists.

The following table gives an account of the treatment carried out during the year.

	Patients	
	In	Out
Number of children treated	152	53
Number examined by surgeon	325	176
Number referred to hospital for orthopaedic treatment by orthopaedic surgeon	11	6
Number of treatments given:		
Stretching	11,699	130
Moulding	431	47
Massage	174	116
Mobilising calipers	2,116	73
Exercises	5,804	367
Postural drainage	33	1
Breathing exercises	514	5
U.V.R.	784	7
Hydrotherapy	633	—
Strapping	1	10
Group	2,727	97
Infra Red	42	—
Co-ordination	1,269	84
Plaster of Paris	5	—
Archery	174	—
Pre-school spina bifida	—	74
X-rays (taken at Withington Hospital)	14	18
Prince & Fletcher	441	65
Miscellaneous (Home visits)	192	—
Visits by A.L.A.C. T.O.'s	11	—
Diagnosis Analysis:		
Poliomyelitis	6	—
Spina bifida	43	5
Hydrocephalus	6	—
Muscular dystrophy	3	—
Muscular atrophy	2	—
Wernig-Hoffman's syndrome	2	—
Congenital deformities	5	1
Arthrogryphosis	2	—
Congenital heart disease	5	—
Hypercalcaemia with enuresis	1	—
Orbital tumour	1	—
Haemophilia	1	—
Transverse-myelitis	1	—
Fragilitas ossium	3	—
Ectopia vesica	1	—
Perthes disease	5	—
Burns contractures	2	—
Spinal lesion	2	—
R.T.A.	4	—
Active hepatitis	1	—
Achondroplasia	1	—
Amputations	1	—
Phocomelia	2	—
Asthma	1	1
Huntingdon's chorea	1	—
Spinal lesion (trauma)	1	—
Pseudo-arthrosis	1	—
Spastic	45	9
Ataxic	12	—
Athetoid	14	1
Scoliosis and poor posture	—	4

Genu valgum	—	8
Overlapping toes	—	4
Flat feet	—	14
Wasted arm	—	1
Hallux valgus	—	1
Intoeing	—	2
Torticollis	—	1
Pan-encephalitis	—	1
Palmar contractures	—	1
Post-surgical osteotomies	—	1

Number of school children discharged during the year—31

Mortality of school children

The table printed below shows the causes of death among school pupils during 1973.

Disease or other cause	Female	Male	Total
Road traffic accident	1	8	9
Misadventure	2	6	8
Defects of central nervous system	7	3	10
Heart conditions	–	4	4
Neuroblastoma	1	–	1
Meningitis	1	–	1
Leukaemia	2	1	3
Tumours of bone	1	1	2
Nephroblastoma	–	1	1
Renal failure	1	–	1
Blood disease	1	–	1
Infections	2	–	2
Total	19	23	43

Disinfection of plimsolls

Each year a service is provided for the disinfection of plimsolls used for physical education in day schools.

The plimsolls were collected during the summer holidays and disinfected at the Health Department disinfecting station at Monsall Hospital. After treatment the shoes were returned to the schools before the commencement of the autumn term. During 1973 twenty schools used the service, and 2,880 pairs of plimsolls were disinfected.

Co-operation with medical practitioners and hospitals

During 1973, 433 children examined by school medical officers at routine school examinations were referred for hospital treatment or a consultant's opinion, having previously obtained the consent of their family doctor. In other instances the treatment for 12 children was undertaken by the family practitioner himself. Close co-operation with the hospital consultants continued and headteachers proved very helpful in submitting reports when these were requested by the consultants in order to determine the necessary treatment. A copy of the subsequent hospital report was made available to the school medical officer and was finally filed with the child's medical records.

An asthma survey is being carried out in conjunction with the Royal Manchester Children's Hospital.

Children attending the allergy clinic at the hospital are periodically supervised at their local school clinic.

Home conditions are investigated and advice given on dust control. In certain cases recommendation for rehousing has been made and in others it has been found beneficial to transfer children to Styal Open Air School.

Number of children taking part in the survey ..	138
Number of cases returned to Gartside Street completed	30
Number of cases still under supervision at local clinics	78
Number of cases whose parents tefuse to co-operate	3
Number of cases who failed repeated clinic appointments	27
Number of cases referred to R.O.A.S.	6
Number of cases referred for rehousing	2

Department of Education and Science Annual Returns

Year ended 31st December, 1973

Part I—Medical inspection of pupils attending maintained primary and secondary schools

(including nursery and special schools)

Table A

Periodic Medical Inspections

Age Groups inspected (By year of birth) (1)	Number of pupils who have received a full medical examination (2)	Physical condition of pupils inspected		Number of pupils found not to warrant a medical examination (5)
		Satisfactory Number (3)	Unsatisfactory Number (4)	
1969 and later	1,465	1,461	4	
1968	3,544	3,533	11	
1967	3,715	3,692	23	
1966	1,548	1,538	10	
1965	866	857	9	
1964	832	828	4	98
1963	2,925	2,911	14	1,643
1962	1,849	1,842	7	813
1961	849	848	1	
1960	608	605	3	
1959	3,704	3,699	5	
1958 and earlier	5,243	5,221	22	
	27,148	27,035	113	2,554

Table B.

Other inspections

Number of special inspections	24,135
Number of re-inspections	15,579
Total	39,714

Table C.

Infestation with vermin

Total number of individual examinations of pupils in schools by school nurses or other authorised persons	315,823
Total number of pupils found to be infested	10,715
Number of individual pupils in respect of whom cleansing notices were issued (Section 54(2) Education Act 1944)	200
Number of individual pupils in respect of whom cleansing orders were issued (Section 54(3) Education Act 1944)	99

Part II—Treatment of pupils attending maintained primary and secondary schools
(including nursery and special schools)

Table A.

Eye diseases, defective vision and squint

External and other, excluding errors of refraction and squint	1,092
Errors of refraction (including squint)	4,682
Total	5,774
Number of pupils for whom spectacles were prescribed	1,282

Table B.

Diseases and defects of ear, nose and throat

Received operative treatment:	
(a) for diseases of the ear	119
(b) for adenoids and chronic tonsilitis	499
(c) for other nose and throat conditions	45
Received other forms of treatment	3,541
Total	4,204

Total number of pupils in schools who were known to have been provided with hearing aids:	
(a) in 1973	23
(b) in previous years	158

Table C.

Orthopaedic and postural defects

(a) Pupils treated at clinics or out-patients departments	792
(b) Pupils treated at school for postural defects	—
Total	792

Table D

Diseases of the Skin
(Excluding uncleanliness, for which see Table C of Part 1)

Ringworm:	
(a) Scalp	2
(b) Body	—
Scabies	737
Impetigo	144
Other skin diseases	5,761
Total	6,644

Table E

Child guidance treatment

Pupils treated at child guidance clinics	1,127

Table F

Speech therapy

Pupils treated by speech therapists	**2,422**

Table G

Other treatment given

Pupils with minor ailments	12,967
Pupils who received convalescent treatment under school health service arrangements	1,075
Pupils who received B.C.G. vaccination	5,065
Others:	
Chiropody	11,358
Haemoglobin	254
Ultra violet ray treatment	246
Disinfestation	4,558
Poliomyelitis vaccinations	4,496
Rubella vaccinations	5,013
Measles vaccinations	17
Immunization—Triple Antigen	27
Immunization—Diph/Tet.	5,121
Immunization—Diphtheria	35
Immunization—Tetanus	74

Part III—Dental Inspection and Treatment Carried out by the Authority

Attendances and Treatment

	Ages 5 to 9	Ages 10 to 14	Ages 15 and over	Total
First visit	8,603	8,219	1,744	18,566
Subsequent visits	11,132	13,484	4,360	28,976
Total visits	19,735	21,703	6,104	47,542
Additional courses of treatment commenced	750	772	269	1,791
Fillings in permanent teeth	7,942	21,117	7,921	36,980
Fillings in deciduous teeth	8,948	818	—	9,766
Permanent teeth filled	5,878	17,074	5,993	28,945
Deciduous teeth filled	6,613	637	—	7,240
Permanent teeth extracted	1,603	4,912	1,308	7,823
Deciduous teeth extracted	16,623	4,926	—	27,549
General anaesthetics	5,114	2,913	456	8,483
Emergencies	1,025	822	246	2,093
Number of pupils X-rayed	—	—	—	1,708
Prophylaxis	—	—	—	6,923
Teeth otherwise conserved	—	—	—	3,880
Number of teeth root filled	—	—	—	78
Inlays	—	—	—	34
Crowns	—	—	—	59
Courses of treatment completed	—	—	—	17,915
Orthodontics				
New cases commenced during year ..	—	—	—	391
Cases completed during year..	—	—	—	256
Cases discontinued during year	—	—	—	70
No. of removable appliances fitted	—	—	—	523
No. of fixed appliances fitted..	—	—	—	39
Pupils referred to Hospital Consultants ..	—	—	—	12
Prosthetics				
Pupils supplied with F.U. or F.L. (first time)	—	1	4	5
Pupils supplied with other dentures (first time)	7	89	106	202
No. of dentures supplied	8	96	113	217
Anaesthetics				
General anaesthetics administered by dental officers	—	—	—	4,321
Inspections				
First inspection at school: No. of pupils ..	—	—	—	46,368
First inspection at clinic: No. of pupils ..	—	—	—	15,472
No. found to require treatment	—	—	—	37,588
No. offered treatment	—	—	—	37,295
Pupils re-inspected at school or clinic ..	—	—	—	2,950
No. found to require treatment	—	—	—	2,679
Sessions				
Sessions devoted to treatment	—	—	—	8,717
Sessions devoted to inspection	—	—	—	361
Sessions devoted to Dental Health Education	—	—	—	160

Part IV—Staff of the School Health Service

Table A

	Number of Officers	Number in terms of full-time officers employed in the School Health Service
Medical Officers (including the Principal School Medical Officer and Deputy):		
Whole-time school health service	8	8·0
Part-time school health service and rest of time local health service	4	0·8
Part-time school health service and rest of time as General Practitioner	9	2·8
Part-time school health service and rest of time on other medical work	11	4·8
Ophthalmic specialists	6	1·1
Other consultants and specialists	6	1·7
Senior speech therapist	1	1·0
Speech therapists	20	14·5
Audiologists	2	1·2
Chiropodists	4	1·2
Orthoptist	2	1·3
Physiotherapists	18	15·0
Remedial gymnast	1	0·5
Number of school clinics	—	22

Table B

School Dental Service

Staff of the School Dental Service

	Number in terms of full-time officers employed in the school dental service			
	Number of Officers	Employed on admin. duties	Clinical duties	
			School Service	M. & C.H. Service
(a) Officers employed on a salary basis:				
Principal school dental officer	1	0·5	0·4	0·1
Dental officers	13	0·3	10·7	0·9
(b) Officers employed on a sessional basis:				
Dental officers (including orthodontists)	20	—	5·5	—
Totals (a) and (b)	34	0·8	16·6	1·0

(c) Dental auxiliaries and hygienists:	Full-time equivalent		
	Number	Treatment	
		School Service	M. & C.H. Service
Dental auxiliaries	6	5·5	0·5

(d) Other staff:	Number	Full-time equivalent
Dental technicians	5*	5·0
Dental surgery assistants	34	31·4
Clerical assistants	1	1·0

*One is an apprentice technician

School Dental Clinics

	Static Clinics				Mobile Clinics	
	Number with one surgery only	Number with two or more surgeries	Total number of surgeries		Total number of surgeries	
			Available	In use	Available	In use
Provided directly by Authority	10	8	27	27	2	–

Treatment was given at five residential schools.

Dental health education

Twenty thousand school children were given talks, demonstrations and films on dental health education, prophylaxis and chairside dental health instructions were given to 6,923 pupils. The dental auxiliaries each used one session per week for topical application of fluoride. A mobile dental caravan with health exhibition was on site at the Manchester Expo 1973 Transport Exhibition for three weeks, hundreds of visitors, school parties, parents and children visited the caravan. Dental health, careers in dentistry, demonstrations of modern dental treatment techniques and use of dental equipment were given. It proved to be a very successful public relations exercise for dentistry, the school dental service in particular and the profession as a whole.

Table C

Type of examination and/or treatment provided at the school clinics

Examination and/or treatment	Number of school clinics (i.e. premises) where such treatment is provided	
	Directly by the Authority	Under arrangements made with hospital authorities
Minor ailment and other non-specialist examination or treatment	18	—
Audiology	2	—
Chiropody	10	1
Ear, Nose and Throat	1	—
Enuretic	7	—
Ophthalmic	11	—
Orthopaedic	2	—
Orthoptic	8	—
Physiotherapy and remedial exercises ..	4	—
Speech Therapy	13	—
Sunray (U.V.R.)	2	—
Vaccination and immunization	18	—
Haemoglobin	1	—

Table D

Child Guidance Clinics and the School Psychological Service

Number of child guidance clinics provided by the Authority 5

	Number employed		Aggregate in terms of the equivalent number of whole-time officers			
			employed by L.E.A.		employed under arrangements with hospital authorities	
	by L.E.A.	under arrangements with hospital authorities	in child guidance clinics	in school psychological service	in child guidance clinics	in school psychological service
*Psychiatrists	2	—	1·3	—	—	—
Educational psychologists ..	10	—	6·0	3·4	—	—
*Social workers	11	—	10·0	—	—	—
Remedial teachers	33	—	—	31·0	—	—
Special teachers	5	—	—	—	—	—

*School Health Service Staff

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